

## The Basic Stages of the Boundary Making Process



- ❖ Boundary Allocation
- ❖ Boundary Delimitation
- ❖ Boundary Demarcation
- ❖ Boundary Documentation
- ❖ Boundary Maintenance



## A Model of Boundary Delimitation in a Peace Agreement

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# YES!

And there it is:



## Is there a recommended model of boundary delimitation in a peace agreement?



## Map Index



## The Recommended Model of Boundary Delimitation in a Peace Agreement



- A small scale map index.
- Large scale orthophoto sheets or orthoimages showing the boundary delineation.
- Instructions for boundary demarcation.
- Instructions for surveying, recording of coordinates and boundary documentation.
- Instructions for a procedure of authorization of the coordinates and definition of order of precedence with reference to binding materials.
- Instructions for boundary maintenance and boundary restoration.
- Definition of a time schedule.
- Construction of a joint professional organ to be responsible for the implementation.



# Instructions for Boundary Demarcation



# Large Scale Orthophotos



# Authorization of the List of Coordinates



# Surveying, Recording of Coordinates and Boundary Documentation



## Additional Components:

- Time Schedule.
- Organization (organ) responsible for the implementation process.
- A joint boundary datum.



# Boundary Maintenance

## The Main Tasks of the JTE – before the Treaty



- ❖ To assist the Boundary Commission with the wording of the article and the annexes with reference to the International Boundary in the Peace Treaty.
- ❖ To delineate the boundary line in the Treaty documents in accordance with the decision makers.
- ❖ To define a common geodetic framework for the definition of the boundary coordinates.

## The JTE – Joint Team of Experts



## The Joint Boundary Datum:



- ❖ Determination of a reference frame.
- ❖ Definition of a joint boundary datum.

## The Main Tasks of the JTE – after the Treaty



- + To demarcate the land boundary (pillars).
- + To conduct a field survey of boundary pillars and computation of the coordinates.
- + To document the International Boundary demarcation.
- + To maintain the boundary line.

## ANNEX I (a) - ISRAEL-JORDAN INTERNATIONAL BOUNDARY DELIMITATION AND DEMARCATION:



### "2.C. Emek Ha'arava/Wadi Araba

1. The boundary line is shown on **1:20,000 orthophoto** maps (10 sheets, Appendix I attached to this Annex)
2. The land boundary shall be demarcated, under a joint boundary demarcation procedure, by **boundary pillars which will be jointly located, erected, measured and documented** on the basis of the boundary shown in the 1:20,000 orthophoto maps referred in Article 2-C-(1) above. Between each two adjacent boundary pillars the boundary line shall follow a **straight line**.

## The Case Study:



**The implementation of the model in the 1994 Peace Treaty between Israel and Jordan.**

**ANNEX I (a) - ISRAEL-JORDAN INTERNATIONAL BOUNDARY DELIMITATION AND DEMARCATION:**



**"2.C. Emek Ha'arava/Wadi Araba**

4. The boundary pillars shall be **maintained by both Parties** in accordance with a procedure to be agreed upon. The coordinates in Article 2-C-(3) above shall be used to reconstruct boundary pillars in case they are damaged, destroyed or displaced."

**"3. Joint Boundary Commission**

- A. For the purpose of the implementation of this Annex, the Parties will establish a Joint Boundary Commission comprised of three members from each country.
- B. The Commission will, with the approval of the respective governments, specify its work procedures, the frequency of its meeting, and the details of its scope of work. The Commission may **invite experts** and/or advisors as may be required.
- C. The Commission may form, as it deems necessary, specialized team or committees and assign to them technical tasks."

**ANNEX I (a) - ISRAEL-JORDAN INTERNATIONAL BOUNDARY DELIMITATION AND DEMARCATION:**



**"2.C. Emek Ha'arava/Wadi Araba**

3. The boundary pillars shall be defined in a list of geographic and **UTM** coordinates based on a **joint boundary datum (IJDB 94)** to be agreed by the Joint Team of Experts appointed by the two parties (hereinafter the **JTE**) using joint Global Positioning System (**GPS**) Measurements. The **list of coordinates** shall be prepared, **signed and approved by both Parties** as soon as possible and not later than **9 month after this Treaty** enters into force and **shall become part of this Annex**. This list of geographic and UTM coordinates when completed and agreed upon by both Parties **shall be binding and shall take precedence over the maps** as to the location of the boundary line of this sector.

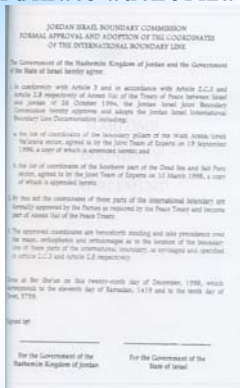
**Example of a delimitation on an orthophoto**



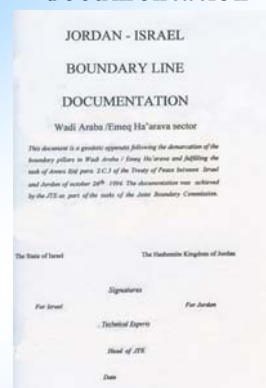
**Example of map index**



**Example of a coordinate authorization**



**Example of a boundary documentation**



# Conclusions



- \* An innovative comprehensive model of boundary delimitation in a peace treaty was introduced.
- \* This model has the potential of preventing boundary disputes caused by technical problems.
- \* This model of boundary delimitation was successfully implemented in the peace treaty between Israel and Jordan.