### **Introduction**

### **‘Peace Cartography’** in Bosnia-Herzegovina

(Take a look at the Example Introduction Image for the part of this website which is how I would like for figures to appear when you scroll the text: <https://moruroa-files.org/en/investigation/moruroa-files> go to the the *Forgotten Victims* chapter, under the map, the image scroll begins with the red notebook. The footnotes should appear in the most right column when scrolling)

The war in BiH started in 1992 after this country proclaimed independence from Yugoslavia and the ensuing aggression by the Yugoslav National Army under the control of Serbian ethno-nationalist elites. This led to a series of violent conflicts and war that was qualified as map-driven. Maps were continuously used by conflict parties and international negotiators, to claim territory, to document military control, or to divide the country on paper. Mapmaking also preceded the conflict as different parties[[1]](#footnote-0) produced competing visions of ethnic distribution in former Yugoslavia to indicate their desired territorial claims.

The multiethnic complexity of the country was somewhat evident in the official 1991 ethnic map, so-called ‘leopard skin’ map, which visualised the demographic composition in a more contextualised, detailed and complex way. Figure 1 appears with this paragraph with caption: *Ethnic Map of BiH (Markotić et al., 1991). Image credits: Bosniak Institute - Adil Zulfikarpašić.*

The maps created afterwards, during the war and in the postwar period, increasingly diminished the representation of multiethnicity (e.g. a high percentage of mixed marriages and families in urban areas) by visualising three majority ethnicities as homogenised groups with choropleth method[[2]](#footnote-1). Figure 2 appears with this paragraph with caption: *Ethnical majority map produced in 1996 by the International Management Group. Image credits: Bosniak Institute - Adil Zulfikarpašić.*

During the peace negotiations in Dayton in 1995, the US negotiating team introduced a new software for delineating terrain, called Powerscene. It was supposed to produce a precise three-dimensional terrain simulation which would help draw territorial division lines in high detail. In retrospect, numerous US participants spoke with enthusiasm of this software and its supposedly objective approach to visualising territory[[3]](#footnote-2). Its 3D simulation was so detailed that the participants could even see the streets and houses in which their families lived. But this visualisation also affected how participants saw land as empty, worthless or valuable, leading to specific decisions on how to divide it (more in Chapter 1). Figure 3 appears with this paragraph with caption: *Screenshot taken from the WPSU‘s Geospatial Revolution series, Episode 3, on the use of Powerscene technology during the Dayton peace agreement talks. Used with permission.*

In the fall of 1995, peace in BiH was finally brokered in the city of Dayton, Ohio with the Dayton Peace Agreement (DPA). The Inter-Entity Boundary Line (IEBL, *entitetska linija*) was drawn to divide the country by establishing two entities, the “Federation of Bosnia and Herzegovina” (FBiH) and the “Republika Srpska” (RS). The drawing of the IEBL followed ethnic and military criteria. The imposition of this criteria over complex spatial reality of BiH meant the line would need to cut through cities, villages, streets–in some areas, straight through the houses of people. But it also cut through landscapes, forests, mountains, rivers, lakes and other uninhabited land, often described as worthless during the negotiations (more in Chapter 2). Figure 4 appears with this paragraph with caption: *BiH territorial division, image by VisLab.*

**Chapter 1**

***51:49*** *Pragmatic absurdities of Dayton*

**Section I**

The peace proposal maps rendered the land in BiH divisible by visualising it as ethnic ownership or military terrain. The use of maps shaped how participants in the negotiations saw swaths of inhabited land as important for being owned by specific ethnic groups, while describing uninhabited areas as empty or worthless. At one point, they agreed to the ethnic division of land in the ratio of 51% for Bosniak and Bosnian-Croat part and 49% for Bosnian Serb part. This ratio of 51:49[[4]](#footnote-3) was formalised in the negotiations led by the Contact Group in 1994 and it provided a calculative goal that would moderate negotiations and motivate exchange of occupied land. What followed across negotiations, and up to the Dayton Peace Accords, was a struggle to meet this ratio as the situation on the ground was continuously changing through military action. In scoping the land to find percentages and reach the 51:49 ratio, paper maps and Powerscene visualisation affected how parts of the land were exchanged and divided in relation to their perceived value.

**Section II**

*Figure 5 central alignment*

**Section III**

*Map on the left (Section II map) + Quotes below should appear on the right of the map when the area on the map is clicked*

Before clicking, the text on the right should say:

This map reveals some of the absurdities and abstractions of land which emerged during the final rounds of negotiations in Dayton. These statements exemplify the US-centric narrative of exchanging land with the help of maps and terrain visualisation. They are also reflective of the pragmatic approach to dividing land with ad hoc and simplified solutions in searching for a ‘cartographic fix’ (Toal and Dahlman 2002) that would resolve the war in BiH. Cartographic vision and technology contributed to specific ways of qualifying land - at times as ‘something’, ‘anything’ or ‘nothing’, at others as ‘worthless’, ‘theoretical’, ‘egg’- shaped, or a ‘croissant’. These qualifications abstracted land in diplomatic circles as they strived to find a pragmatic and viable solution to dividing territory of BiH, neglecting its complex spatial reality and distracting from the violence that was undertaken to undo its plurality. Cartography served as an aid to this process and a decoy to represent ad hoc solutions as based on highly sophisticated scientific and technological expertise.

When clicking Clark Corridor:

"(...) every detail of the area between Sarajevo and Goražde. The road, the hydroelectric plants, the destroyed mosques, the small village along the road where General Mladić came from - all were discussed with passion and anger”. (Holbrooke 1998, 281)

Milosevic had offered the Bosnians a thin two-mile road corridor to connect Sarajevo to Gorazde, which, as Clark’s PowerScene tour of the mountainous terrain revealed, was completely unviable. After two hours and a bottle of Scotch (of which Milosevic consumed four glasses), they reached an agreement on a wider corridor through the mountainous terrain. “We have found our road,” Milosevic pronounced. Because of the circumstances surrounding this event, many began to call this agreement, suitably, as the “Scotch Road” or the “Clark Corridor.” Although Holbrooke deliberately downplayed this as a “minor concession”—and dismissed the influence that alcohol might have had over Milosevic’s decisionmaking— it did represent the first substantial breakthrough on a key issue in days. The American team hoped that it might be the first crack in the dam blocking a final settlement. (Chollet 2007)

When clicking Ozren and Bjelasnica:

In the last rounds of territorial swaps taken to reach the 51:49 ratio, Bosnian mountains (e.g. Ozren and Bjelašnica) were easily given away as a sacrifice to gain ‘more important’ land (Komšić 2013, 434)

Since significant "portion of the terrain in Bosnia consisted of sparsely inhabited mountain areas ("worthless land" in Silajdžić’s dismissive phrase), there was room for some compromise but not much. (Holbrooke 1998, 296)

When clicking Croatian Belly or Croissant:

In West Herzegovina, Franjo Tuđman was committed to fattening up the “Croatian belly” (Begić 1998) or “croissant” (Komšić 2013), the area which would pragmatically expand Croatian borders.

When clicking The Egg:

“He drew a large egg-shaped area in western Bosnia and offered the land to RS. Mountainous, lightly populated Serb region south of Ključ taken over during Croat offensive - what Silajdžić meant ""when he talked of "worthless land". Because of its shape, Hill dubbed it ""the egg"" while Milošević, thinking it resembled Spain, called it "the Iberian peninsula"... (Holbrooke 1998, 299)

The Federation would give Srpska a wide swath of territory in a mountainous, relatively unpopulated area in western Bosnia. Since this egg shaped area had few towns (which both sides were reluctant to give away), and had been recently captured during the Croat military offensive, the exchange seemed fair. (Chollet 2007)

When clicking Posavina pocket:

Tuđman accepted to give 75 percent of the egg if muslims would give some of their land up and he could get back part of Posavina pocket (Holbrooke 1998, 299).

Now Muslims had to give back 1 percent of their land - but this was not an issue, since this was land that they had been given in the last few days - "theoretical land" as they called it. (Holbrooke 1998, 302)

1. This included delegations representing the interests of BiH and those representing alliances of Croat-Bosnian Croat and FR Yugoslavia-Bosnian Serb delegations. The composition of international delegations changed across the different peace talks, with EU members leading the initial peace talks (e.g. Vance-Owen and Contact Group proposal) and the US taking over in the final stages. The BiH official delegation was mainly designated by the international negotiators as ‘Bosnian Muslim’, but at most talks it included a more multiethnic representation of the country. See detailed chronologies of different peace talks aspects in Begić 1998, Cruickshanks 2022, Komšić 2013, and Klemencić 1994. [↑](#footnote-ref-0)
2. Choropleth maps are used dominantly and widely even though this model is characterised by multiple limitations (Crampton 2009, 29) such as those of neglecting variations in population density between different bounded areas, e.g. municipalities. [↑](#footnote-ref-1)
3. See e.g. the accounts of Holbrooke 1998 and Chollet 2007 where they discuss the power of this software to bring the emotions of the local parties under control. They claimed how Powerscene afforded precision in the delineation of territory, it also made the local participants aware (and intimidated) by the spatial intelligence possessed by the US (Branch 2017, Crampton 1996, see also PBS WPSU’s show Geospatial Revolution, ep. 3 on YouTube). While the US-centric narratives of Powerscene claim an enamoration with this technology in all local participants, it is difficult to find any mention of it in the accounts and writings by members of the BiH delegation. This begs the question of how important Powerscene really was for closing the agreement, or how much it was glorified retrospectively to justify the division as technologically devised. [↑](#footnote-ref-2)
4. The ratio marked a moment of turning away from the idea of dividing BiH in three ethnic units, towards a model that proposed the union between Bosniaks and Bosnian Croats in a multiethnic unit. The percentage was based on a previous Milošević-Tuđman allocation deal which “became the basis for the territorial partition eventually agreed upon at the Dayton negotiations in November 1995. Rather than a three-way split, the divide was 51:49 since American coercive diplomacy over the intervening two years had changed the terms of a possible cartographic fix in Bosnia-Herzegovina” (Toal & Dahlman 2012, 154). The precise ratio was discussed across different peace plans as a tactic of producing a “more coherent map” (Toal and Dahlman 2012, 154) which would make the negotiation goals seem tangible and simple. [↑](#footnote-ref-3)