IT-95-9-PT
D 9696 - D 9651
17 AUGUST 2001

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THE INTERNATIONAL CRIMINAL TRIBUNAL
FOR THE FORMER YUGOSLAVIA

Case No. IT-95-9-PT

IN THE TRIAL CHAMBER

Before: **Judge David Hunt, Presiding**
Judge Florence Mumba
Judge Patricia Wald

Registrar: **Mr. Hans Holthuis**

Date Filed: **17 August 2001**

THE PROSECUTOR

v.

BLAGOJE SIMIĆ
MILAN SIMIĆ
MIROSLAV TADIĆ
SIMO ZARIĆ

PROSECUTOR'S REQUEST TO HAVE ONE ADDITIONAL WITNESS ADDED TO ITS WITNESS LIST

The Office of the Prosecutor:
Peter McCloskey

Counsel for the Other Parties:
Mr. Slobodan Zečević,for Milan Simić
Mr. Igor Pantelić,for Blagoje Simić
Mr. Nowak Lukić,for Miroslav Tadić
Mr. Borislav Pisarević, for Simo Zarić

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1. The Prosecutor hereby requests that the Chamber authorize the addition of one witness to its list of witnesses. Specifically the Prosecutor would like to present evidence from Dr. Ewa Tabeau, Ph.d. who is an expert in demographic studies.

2. The Third Amended Indictment indicates that the Defendants have been charged with "the deportation, forcible transfer and expulsion of Bosnian Croats, Bosnian Muslims and non-Serb civilians from their homes and villages by force, intimidation and coercion."[1] In the final two paragraphs in the indictment (35 and 37) the change in ethnic composition is described.

3. On 09 April 2001 the Prosecution filed its pre-trial brief in accordance with Rule 65 of the Rules of Procedure And Evidence. In several sections of the brief it is alleged that illegal deportation occurred resulting a significant change in the composition of the non-Serb population.[2]

[1] See Paragraphs 14(d), 15(e), 17(d), 18(e), 20-23, 35 and 37
[2] See Paragraphs 2, 6, 25-29, 35, 50, 60, 70, 72-79, 100, 112-117 and 121-124.

4. The Defence filed their respective pre-trial briefs on 06 and 07 May 2001 and disputed that non-Serb residents were forcibly deported from the area and alleged that "unfounded statistical data" was used in the Prosecution's Pre-Trial Brief.[3]

5. Dr. Tabeau and Jakub Bijak recently prepared a report on the changes in ethnic composition in the municipalities of Bosanski Šamac and Odžak between 1991 and 1997. Copies of this report have been served upon all defence counsel by either in-hand service or by post. A copy of the report is attached and marked as "Annex A".

6. As a matter of background, Ewa Tabeau is an expert in population demographics. She obtained a Ph.d in mathematical demography in 1991. Thereafter, she was employed until September, 2000 as a senior researcher and project leader at the Netherlands Interdisciplinary Demographic Institute in the Hague. She has published 3 monographs and 23 articles concerning demographics. She is currently a member of the Office of the Prosecutor's Demographic Unit.

7. The Prosecutor submits that in the interests of justice, Dr. Tabeau should be allowed to testify at trial. Specifically, this witness can provide numerical evidence relating to the change in composition of the ethnic populations. Such evidence is highly relevant to the allegations of forced deportation and ethnic cleansing. Contrast **Prosecutor v. Musema**, Decision on the Prosecutor's Request for Leave to Call Six New Witnesses, Case No. ICTR-96-13-T, T. Ch. I, 20 April 1999, paras. 8-9, 16-17 (where the Trial Chamber refused to hear an expert witness where their testimony did not relate to allegations in the indictment).

8. A number of witnesses will provide direct evidence on the changes in the non-Serb population, however, this witness will provide statistical evidence including maps, charts and graphs on this issue. In this manner the witness can assist the court in understanding the nature and extent of the change in ethnic composition.

[3] See e.g. Miroslav Tadic's Defence Pre-Trial Brief at paragraphs 3, 7, 20-23, 34-35 and 43.

9. The addition of this witness to the Prosecutor's list will not cause undue hardship to defence counsel since they will have adequate time to review and consider the report.

10. The Prosecutor further submits that the addition of this witness will not cause any unreasonable delay or significantly extend the length of the trial. In fact, the direct examination of the witness will only highlight and explain the salient portions of her report (as opposed to all aspects of the study).

11. Therefore, the Prosecutor respectfully requests leave of the Chamber to add Dr. Ewa Tabeau to her witness list.

Peter McCloskey
Senior Trial Attorney

ANNEX A

Changes in the ethnic composition in Bosanski Šamac and Odžak, 1991 and 1997

Ewa Tabeau and Jakub Bijak
Demographic Unit - LRT

Research report prepared for the case of SIMIĆ et al. (IT-95-9)

9 August 2001

Responsibilities and professional qualifications of the authors of the report:

Changes in the ethnic composition in Bosanski Šamac and Odžak, 1991-1997

9 August 2001

The report "Changes in the ethnic composition in Bosanski Šamac and Odžak, 1991-1997" (hereafter: the Posavina report) is a product of the joint effort of two researchers: Ewa Tabeau (ET) and Jakub Bijak (JB), who completed this report as part of activities of the Demographic Unit, Office of the Prosecutor, ICTY. The analyses concluded in the report were formally organised in the Posavina project carried out in 2001.

ET is a senior researcher with extensive experience in demography and statistics, she graduated in statistics and econometrics, and has a Ph.D. in mathematical demography. JB is a research assistant, and has studied statistical methods and demography, and is competent in large-scale data processing. ET was responsible for the analytical aspects of the Posavina report (methods, data types, analysis design, interpretation of results etc.). JB was responsible for the data processing aspects, including individual-level linking of the various sources and quality controls.

ET will act as the contact person to provide explanations and answer possible questions related to the Posavina report. Professional qualifications of ET and JB are summarised below.

Summary of professional qualifications of ET

ET graduated in econometrics and statistics (M.Sc. degree, with "5" - the highest grade, 1981) and obtained her Ph.D. (with "5", the highest grade, 1991) in mathematical demography at the Warsaw School of Economics. In 1983-1991 she was an academic teacher at the Warsaw School of Economics where she taught (descriptive and mathematical) statistics and demography to undergraduate courses. Thereafter, she moved to the Netherlands where she lives and works at present.

From July 1991 to September 2000, ET worked at the Netherlands Interdisciplinary Demographic Institute (NIDI) in The Hague (which is the Dutch national demographic institute), as a senior researcher and project leader. The responsibilities of ET at NIDI included conducting and proposing demographic research regarding modeling and prediction of mortality and health processes in the Netherlands and other European countries. ET has completed many international projects. Several of these projects were contracted by the Commission of the European Communities, other were funded in response to the research proposals written by ET and submitted to the Dutch Organization for Scientific Research, the NIDI itself, or other Dutch and non-Dutch organizations (e.g. the Netherlands Institute for Public Health and Milieu, or the French National Demographic Institute). ET has been systematically invited by national and international organizations to act as a consultant in their projects involving issues of mortality and health development and prediction (e.g. Eurostat – Statistical Office of the European Union; ING Group - Life Insurance NL, Goldman & Sachs - Life Insurance USA, Statistics Netherlands, British Government Actuary's Department). ET has supervised younger researchers completing their theses for M.Sc. or Ph.D. degrees. International and national demographic journals have invited her to make peer reviews of submitted papers.

ET has authored more than 80 research papers. Her record of recent papers includes:

- 3 monographs published internationally (Kluwer Academic/Plenum Publishers), in the Netherlands and in Poland,
- 23 articles published in international and national journals,
- 14 conference papers presented at international conferences,
- 30 research reports and working papers.

ET has links with demographers all over Europe, especially with demographers in Belgium, Czech Republic, Finland, France, Germany, Hungary, Italy, Norway, Poland, and United Kingdom. She has knowledge of several types of software and speaks several languages (Polish, English, Dutch, Russian, and German).

Summary of professional qualifications of JB

JB studied Quantitative Methods and Information Systems at the Warsaw School of Economics (WSE), where he completed, with outstanding grades, the 5th year programme of the graduate studies. Since February 2001, he has been a research assistant in the Demographic Unit at the Office of the Prosecutor, ICTY, The Hague. In 1999-2000 JB worked as a student assistant in the Institute of Statistics and Demography, WSE, where he taught statistics and advanced statistical methods to undergraduate courses. In 1999 he was a junior guest researcher (a three-month fellowship) at the Netherlands Interdisciplinary Demographic Institute (NIDI) in The Hague.

During his university education JB authored many excellent study research papers. As a student he attended several conferences for students and young researchers where he presented a number of interesting conference papers. He also participated in some (Polish and international) research projects related to demographic and economic aspects of society, and wrote several reports.

JB has excellent knowledge of computer software (among others: MS Access, MS Excel, MS Word, MapInfo, ArcView GIS, Statgraphics, SPSS, Statistica) and programming languages (Turbo Pascal, Visual Basic). He speaks and writes several languages (Polish, English, German, Czech, Serbo-Croatian, Dutch and Spanish).

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SELECTED RECENT (since 1992) PUBLICATIONS AND OTHER PAPERS Authored By Ewa Tabeau:

Monographs:

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E. Tabeau, F. van Poppel, and F. Willekens (1994), *Mortality in the Netherlands. The data base.* NIDI-Reports, No. 36, The Hague, Netherlands.

E. Tabeau (1993), *Spatial analysis of mortality determinants in Poland in the 1980s.* Monographs and Working Papers of the Warsaw School of Economics, No.29/371, Warsaw, Poland. PhD thesis.

Articles:

E. Tabeau (2001), A review of demographic models for forecasting of mortality. In: Tabeau, Van den Berg Jeths, and Heathcote: Forecasting mortality ...", ESPO Vol. 9, Kluwer Academic Publishers.

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J. Wolleswinkel-Van den Bosch, F. van Poppel, E. Tabeau, and J. Mackenbach (1998), Mortality decline in the Netherlands in the period 1850-1992: A turning point analysis. *Social Science and Medicine*, Vol. 47, No. 4, pp. 429-443.

E. Tabeau (1997), Lange termijn perspectieven voor levensverwachting: een literatuurverkenning. (Prospects for life expectancy in the Netherlands based on empirical research). In: A. van den Berg Jeths (ed.): *Volksgezondheid Toekomst Verkenning 1997*. Deel VII: Gezondheid en zorg in de toekomst. (Dutch) National Institute of Public Health and the Environment (RIVM). Elsevier/De Tijdstroom.

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C. Huisman and E. Tabeau (1999), Final results of the project 702.02: Model descriptions. Technical report in the project *Forecasting of mortality by sex, age and cause of death* (SOC 97 102123 05E01). NIDI.

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E. Tabeau (1997), Quantification of regional mortality differences in eleven European countries in the early 1990s. Research proposal for the study training of a student in demography. Funded by NIDI.

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E. Tabeau (1995), Demographic scenarios and implications of aging: Mortality and health. Not funded.

E. Tabeau (1995), Mortality of the oldest old in France: current developments and projections. Research proposal. Funded by INED and NIDI.

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E. Tabeau and F. van Poppel (1995), The role of socio-cultural differences among regions in the explanation of regional differences in mortality by cause of death in the Netherlands and other European countries. Research proposal. Funded by the Dutch Organization for Scientific Research (Dutch NWO).

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E. Tabeau (2000), Review of the new method for mortality projections in the latest (2000) official national population projections for the Netherlands. For Statistics Netherlands, Demographic Forecasting Section. The Netherlands.

E. Tabeau (1999), Reliability of cause-of-death statistics in small sample populations. Expertise for Eurostat. The Eurostat experts meeting on "Standardization of causes of death statistics", February 25, 1999, Luxembourg.

E. Tabeau (1999), "Survey on the Methodology and Assumptions of the Next French Population Projections". Expertise for INSEE, France, together with Huisman, November 24, 1999.

E. Tabeau (1999), "Prospects for life expectancy prospects in the Netherlands". Expertise for the project "Deltaplan Vergrijzing". Instituut Beleid & Management Gezondheidszorg, Erasmus University, Rotterdam, November 16, 1999.

E. Tabeau (1998), "Expectations related to the future decline in mortality in the Netherlands". Expertise for the life insurance companies, the ING Group, The Netherlands, and Goldman & Sachs, United States. October 21, 1998.

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Regional differences in mortality by cause of death in the countries of the European Community, 1994-96. Funded by DG-XVI in 1999-2000. Project leader: Tabeau, research team: Tabeau.

Regional differences in mortality by cause of death in the Netherlands, Poland, and the Czech Republic, 1994-96. Funded by NIDI and DG-XVI in 1999. Project leader: Tabeau, research team: Tabeau, Bijak, Rychtarikova.

Forecasting of mortality by sex, age and cause of death: Searching for better methods and realistic assumptions (SOC 97 102123 05E01). Funded by DG-V in 1998-99. Project leader: Tabeau, research team: Tabeau, Huisman, Boleslawski.

Forecasting of mortality in developed countries: Searching for better methods and realistic assumptions. Workshop and a book. Funded by NIDI and DG-V in 1998-99. Project leader: Tabeau, research team: 15 researchers from the Netherlands and other countries.

The role of socio-cultural differences among regions in the explanation of regional differences in mortality in the Netherlands and other European countries. Funded by NWO in 1997-98. Project leader: Tabeau, research team: Tabeau, Spijker, Bosch, Liefbroer.

Analysis and projection of mortality by gender, age/generation, and main causes of death for the countries of the European Economic Area. Funded by DG-V in 1996-97. Project leader: Tabeau, research team: Tabeau, Ekamper, Huisman, Bosch.

Cause of death-specific projections of Dutch mortality up to 2015. Funded by RIVM in 1997. Project leader: Tabeau, research team: Tabeau, Huisman.

Human longevity in the future: The Dutch perspective. Funded by RIVM in 1997. Project leader: Tabeau, research team: Tabeau.

Mortality after the age 80 years in France and the Netherlands. Funded by INED in 1996. Project leader: Tabeau, research team: Tabeau, Ekamper, Huisman.

Modelling mortality by cohort, period, and main causes of death. Funded by NWO from (mid)1991 to (mid)1994. Project leader: Willekens, research team: Tabeau, Willekens, Van Poppel.

Changes in the ethnic composition in Bosanski Šamac and Odžak, 1991 and 1997

Ewa Tabeau and Jakub Bijak

August 9, 2001

Summary of Results

This report summarises changes in the ethnic composition of two municipalities in the north-eastern Bosnia and Herzegovina, Bosanski Šamac and Odžak, between 1991 and 1997. Our goal is to provide reliable demographic statistics that allow for an assessment of the type and scale of the changes. In our study we analyse two data sources: the 1991 population census and 1997 voters register, and use standard statistical and demographic methods.

Following the Dayton Peace Accords, the pre-war municipalities of Bosanski Šamac and Odžak were divided between the Federation of Bosnia and Herzegovina and Republika Srpska. Four new municipalities emerged: Domaljevac / Šamac (FBH), Šamac (RS), Odžak (FBH), and Odžak / Vukosavlje (RS). The reference map illustrating this division is included at the end of this summary. We use the post-Dayton municipalities as geographic units of the analysis. This approach makes it possible to show population movements *between* and *within* the municipalities of Bosanski Šamac and Odžak, and also *between these and other municipalities* in Bosnia and Herzegovina or *other countries*. We have reconstructed the 1991 population (and its ethnic composition) of the four post-Dayton municipalities using the 1991 census data and compared it with the ethnic composition of the 1997 population of registered voters.

Our major findings are the following:

- The reconstructed 1991 population of Domaljevac Šamac (FBH) amounted to approximately 17% of the population of the (pre-war) Bosanski Šamac. Some 79% of the 1991 Bosanski Šamac population belonged to Serb Šamac, and some 4% of the population to Odžak (FBH).
- In 1991 Bosanski Šamac as a whole had two dominant ethnic groups: Croats (45%) and Serbs (41%). Muslims and Others were represented at 7% each.
- The 1991 population was however unequally distributed within Bosanski Šamac: the part called Domaljevac / Šamac (FBH) in the Dayton Peace Accords had a Croat majority (98%) whereas the part called Šamac (RS) had a Serb majority (55%), a considerable representation of Croats (27%), and a small Muslim minority (10%).
- The post-war ethnic structure of the Domaljevac / Šamac was still dominated by Croats (98%) whereas the Serb Šamac became almost exclusively Serb (92%). **Croats and Muslims largely disappeared from RS Šamac.**

- We reconstructed that some 88% of the 1991 population of the (pre-war) Odžak resided in the area of the Federal Odžak and 12% in the area of the Serb Odžak Vukosavlje.
- The 1991 population of Odžak had a Croat majority (54%) and two considerable minorities of Serbs and Muslims (19% and 21% respectively).

- Again the within-municipality population distribution was far from uniform. Croats (75%) dominated in the Federal part (FBH Odžak), where also Serbs lived as a minority group (22%). Surprisingly in 1991 Croats (38%) and Muslims (38%) were two dominant groups in the Serb part (RS Odžak / Vukosavlje). The fraction of Serbs was 19% in Odžak / Vukosavlje.
- In 1997, the domination of Croats in the Federal part of Odžak had become less prominent (65%) and the place of the Serb minority was taken by Muslims (31%) who probably moved out from the neighbouring Serb part of Odžak. **The Serb Odžak / Vukosavlje became in 93% Serb whereas the two pre-war Croat and Muslim minorities had almost disappeared.**

- Summing up, two clear examples of ethnic cleansing have been shown in this report: **Croats and Muslims largely disappeared from the Serb Šamac and from the Serb Odžak / Vukosavlje. Before the war in both these areas Croats and Muslims represented a considerable fraction of the actual population.**

Map 1. The reference map of the pre-war municipalities of Bosanski Šamac and Odžak

1. Introduction

This report summarises changes in the ethnic composition of two municipalities in the north-eastern Bosnia and Herzegovina, Bosanski Šamac and Odžak, between 1991 and 1997. Our goal is to provide reliable demographic statistics that allow for an assessment of the type and scale of the changes.

In this report we analyse two data sources: the 1991 population census and the 1997 voters register. These sources are reliable and relevant to our objectives. Changes in the ethnic composition are shown by comparing the 1991 census-based statistics with statistics based on the 1997 voters register. The 1991 census is the latest complete population survey conducted directly before the war and gives a very accurate perspective on the population and its ethnic composition in this period. As to the 1997 voters register, we realise that ideally a period closer to the early phase of the conflict should be taken for the comparison with the 1991 census. Such sources are however unavailable to us and therefore cannot be analysed here. Even though the year 1997 is quite distant from the period in which the most population movements occurred, the 1997 voters register can be seen as a valuable source to discuss the war-related changes in the ethnic composition. Firstly, because in 1997 (as we will prove in this report) many displaced persons still lived in areas different from their place of residence in 1991. Secondly, because the returns of internally displaced persons that took place in 1996-97 were not considerable which suggests that many displaced persons resided in 1997 in temporary locations acquired during the war.

The report consists of the "Summary of Results" (included at the beginning of this report), three main sections, and an annex. Section 1 is a general "Introduction", in Section 2 we discuss details of "Data Sources and Methods", and in Section 3 we summarise "Changes in the Ethnic Composition 1991-1997". Finally, the annex provides the reader with some background information about "The Ethnic Composition in Bosnia and Herzegovina in 1991 and 1997-98".

One practical remark regarding the use of the voters register is that when the total number of the 1997 voters is broken down by place of registration, the resulting samples can be very small. In order to increase the sample size, we often use the 1997 voters register in combination with the register from the 1998 election, which was also supervised by the OSCE. The type of information available from the two registers is the same. The 1998 register is only used for those voters who registered first time in 1998. On average approximately 90% or more voters registered first time in 1997 and only 10% in 1998. Therefore, our results should be seen as mainly the 1997 figures.

The use of the 1998 voters register for the municipalities of Bosanski Šamac and Odžak is summarised in Table 1 below. From Table 1 we can see that generally 87.3% voters included in our analysis were the 1997 voters, and only the remaining 12.7% were the 1998 voters. The fraction of the 1997 voters varied amongst the analyses made by different places of registration, the highest being for the analyses completed for the voters registered in other municipalities in Bosnia and Herzegovina. The lowest fraction of the 1997 voters was used in the analysis of the voters who registered to vote in the municipality of the Federal Šamac. In this case, the 1997 voters were replaced by the 1998 voters, which is also reflected in the in appropriate parts of the text (i.e. the discussion of Figure 1 and Table 5).

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Table 1. Distribution of voters by the year of first registration to vote

By Place of Registration		Year of First Registration to Vote 1st 97	1st 98	1st 97	1st 98
Šamac and Odžak		13915	2428	85.1	14.9
Other BH		1717	79	95.6	4.4
Other Countries		6678	727	90.2	9.8
Total		22310	3234	87.3	12.7
Municipality	**OSCE code**	**1st 97**	**1st 98**	**1st 97**	**1st 98**
Odžak (FBH)	017	4612	730	86.3	13.7
Odžak (RS)	018	844	14	98.4	1.6
Šamac (FBH)	020	6	1471	0.4	99.6
Šamac (RS)	021	8453	213	97.5	2.5
Total		13915	2428	85.1	14.9

2. Data Sources and Methods

2.1 Population census for Bosnia and Herzegovina 1991

Our source of information on the pre-war population of Bosanski Šamac and Odžak is the 1991 census for Bosnia and Herzegovina. The census was taken in April 1991 (officially per March 31, 1991), just before the outbreak of hostilities in the former Yugoslavia. The census contains information about a number of variables for each person enumerated. These include municipality and place of residence, name and surname, father's name, household number, personal ID number (*matični broj*), date of birth, sex, occupation, ethnicity, mother tongue, religion, educational attainment, number of children born (for women only), and many other variables.

The overall data quality is good, except for a large amount of misspelled names, due to poor optical scanning of the original census questionnaire and no subsequent checking. To eliminate the misspelling we have developed special software for checking and correcting the names, with the help of experts familiar with naming traditions in the region. A second data quality problem is that a number of records do not include the full 13-digit personal ID number, the *matični broj*, introduced in the former Yugoslavia in 1981. The full date of birth is missing for only 3.3 % and 5.4 % of the 1991 population of Bosanski Šamac and Odžak, respectively.

2.2 OSCE voters register 1997

OSCE (Organisation for Security and Cooperation in Europe) supervised the 1997 (and also 1998) local elections for Bosnia and Herzegovina, as part of this organisation's mandate for democracy building. In this connection it established a register of voters. To register to vote, people had to be included in the 1991 census or present other evidence that they were eligible to vote. Registration stations were established in all municipalities of BH and in many foreign countries. It was possible to register in a municipality that was different from the one where the person lived in before the war.

Besides the variables such as the surname, first name, sex, date of birth, and matični broj, four location items were registered: municipality of residence in 1991, municipality (and centre) of registration to vote in 1997 (or 1998), and municipality for which the person wanted to vote in 1997 (or 1998).

The voters register has some of the same data quality problems as the 1991 census, although not as many, especially misspelled names and missing or incomplete date of birth or *matični broj*. The deficiencies are mostly due to optical scanning of the registration forms. The *matični broj* was checked and all components of this number were found to be complete and valid for 87.6 % of the 1997 voters from Bosanski Šamac and Odžak. The names were checked and corrected with the computer programme mentioned above.

The registration to vote was voluntary, which implies that the register is only a *sample* of the post-war population, excluding those who survived the war but did not register to vote because they were not interested, ill, too old or too young. Still, since at least 75 % of the eligible population registered, our results cannot be greatly weakened. The reason for this is simply that since such a large proportion of the population registered, the errors which may be caused by people who have not registered, are not large enough to seriously bias our results.

There have been allegations that some people registered fraudulently to vote in the 1997 elections, by using false names (i.e. names of dead people). We investigated this thoroughly for Srebrenica and found no evidence of massive fraud in the registration of voters in 1997 and 1998. For Srebrenica only 9 persons (out of about 7500) were found both in the lists of missing persons and in the 1997 and 1998 voters registers.[1]

2.4 Methods

Our approach has been to match information about individuals from the 1991 census with individual records from the lists of missing/dead persons and the OSCE voters register for the 1997 elections. When comparing various lists with data on individuals our approach has been to use the Access data-base program to search for records on one list that match records on the other list. If key variables are identical in two lists the matched records are assumed to represent the same person, otherwise not. This would have been a fast and easy procedure if all individuals on each list were uniquely determined by one or more variables, such as an ID number. However, this is not the case with all lists available to us. Although a unique ID number was introduced in Yugoslavia in 1981, it is not used by e.g. ICRC in their database. Moreover, when it is used, such as in the 1991 census and the OSCE voters register, it is sometimes missing or inconsistent.

The matching of two lists always began by searching for records with identical names and date of birth. It is very unusual that two different persons have identical names *and* are born on exactly the same date, especially if we are only considering the population of a limited area, such as a single municipality. Quite often, however, names are spelled differently or the date of birth is recorded slightly differently – or missing altogether in one or both lists. Consequently, for persons not matched in the first round we made the search criteria gradually broader for one or more variables, for example by including only the *year* (and not the full date) of birth, or only the *initial* of the first name, in addition to the surname. The results of such matches have, however, to be inspected visually to decide if the matches are likely to be of the same person or not, by looking at other available information, such as municipality and place of birth or residence. For example, the place of birth may be given as a municipality on one list and a small hamlet, located in the municipality, on the other list. It would be very complicated, if possible at all, to automate such checks. For difficult cases we checked the 1991 census for additional information, e.g. information about family members of the person in question.

To record the quality and basis for a match, a parameter (a quality indicator) was assigned to each matched person depending on the criteria used for the match. This parameter was used to study the number of accepted matches according to the type and quality of the match. We believe that the accuracy of this method is very good and that it yields reliable results.

As a result of the matching process we were able to identify 25,558 (40.6%) survivors out of 63,016 individuals reported as living in Bosanski Šamac and Odžak in the 1991 population census. Some changes are due to natural population movements before, during and after the war, in particular natural deaths and out-migrations. The largest group of people that we do not have any information about, are the eligible voters who did not register to vote. We also do not possess any post-war information about survivors from age 0 to 17 years. Thus, all estimates of survivors provided in this report are *minimum* numbers. The true figures are substantially higher.

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[1] "Report on the Number of Missing and Dead from Srebrenica", by Helge Brunborg and Henrik Urdal, Office of the Prosecutor, ICTY, 12 February, 2000.

3. Changes in the Ethnic Composition 1991-1997

In this section we discuss changes in the ethnic composition in Bosanski Šamac and Odžak by comparing the 1991 structure with the structure for 1997. In doing so, we analyse four post-Dayton municipalities corresponding to the pre-war municipalities of Bosanski Šamac and Odžak.

3.1 Bosanski Šamac

Before the war the population of Bosanski Šamac increased systematically from about 25,000 in 1948 to 33,000 in 1991. The municipality was relatively densely populated in 1991 (150 persons per 1sq km), much of the population lived in the town of Bosanski Šamac. In 1991, as in 1981, the majority ethnic group were Croats (44.7%; 44.3% in 1981), and Serbs (41.3%; 41.2% in 1981). Muslims were in the minority; their share was only 5.3 and 6.7% in 1981 and 1991 respectively.

Table 2. The total population of Bosanski Šamac since 1948

1948	1953	1961	1971	1981	1991
24593	26383	27944	31374	32320	32960

Source: Stanovnistvo Bosne i Hercegovine. CROSTAT, Zagreb, Travanj 1995

Table 3. Ethnic composition of Bosanski Šamac in 1981, 1991, and 1997

Year	Total	Croats	Muslims	Serbs	Others
1981	32320	14327	1725	13328	2940
1981	100.0 %	44.3 %	5.3 %	41.2 %	9.1 %
1991	32960	14731	2233	13628	2368
1991	100.0 %	44.7 %	6.8 %	41.3 %	7.2 %
1997(18+)	14315	4838	1049	7704	724
1997 (18+)	100.0 %	33.8 %	7.3 %	53.8 %	5.1 %

Source: For 1981 and 1991: Stanovnistvo Bosne i Hercegovine. CROSTAT, Zagreb, Travanj 1995. For 1997: The OSCE Voters Register

Table 3 also shows the ethnic composition of Bosanski Šamac in 1997. The figures for 1997 do not entirely correspond to those for 1981 and 1991. For 1997 only the population at age 18 years or more is included, i.e. the eligible voters, while for 1981 and 1991 all age groups are shown. Moreover, the 1997 voters represent a sample of the whole population, while the 1981 and 1991 figures cover all citizens living in this area. Despite of these deficiencies, the 1997 figures give some impression of the ethnic structure in 1997. As we can see from Table 3, for Bosanski Šamac as a whole, the two pre-war majority groups, Croats and Serbs, were still in majority in 1997. The proportion of Serbs was however considerably higher in 1997 than in 1991, whereas the share of Croats declined from about 45% to only 34 per cent.

In order to produce a more accurate picture of changes in the ethnic composition it is necessary to break down the pre-war municipality of Bosanski Šamac into two parts, exactly as done by the Dayton Accords. This breakdown allows us to reconstruct the population movements that took place within the pre-war municipality of Bosanski Šamac. In addition to this, we will also show internal population displacements within Bosnia and Herzegovina and migration from Bosanski Šamac to other countries.

Bosanski Šamac was split by the Dayton Peace Agreement into Domaljevac / Šamac belonging to the Federation of Bosnia and Herzegovina, and Bosanski Šamac/Šamac belonging to Republika Srpska (hereafter Šamac). The geographic area of Domaljevac / Šamac (FBH) is much smaller than the area of Šamac (RS). Also the population size of these two new municipalities are much different. We have reconstructed the 1991 population for the two post-Dayton municipalities (Table 4) and obtained 4,691 individuals for Domaljevac / Šamac (FBH), and 22,124 individuals for Šamac (RS). One settlement, Prud (1,293 inhabitants in 1991; part of Bosanski Šamac in 1991), was assigned to Odžak by the Dayton Accords and is not included in Domaljevac / Šamac (FBH) nor in Šamac (RS). Some more settlements are excluded as well. These settlements had a total population of 4,852 individuals in 1991 and are excluded from our post-Dayton municipalities because the Dayton line split them between FBH and RS. We are unable to assign the appropriate parts of the split settlements to either political entity.

Table 4. The 1991 population of Bosanski Šamac shown for the post-Dayton municipalities of Domaljevac / Šamac (FBH) and Bosanski Šamac / Šamac (RS)

Post-Dayton Municipality	OSCE Code	Ethnicity	Total	Percent
split settlements	-	Serbs	1642	33.8
		Muslims	7	0.1
		Croats	3004	61.9
		Others	199	4.1
		All	4852	100
Odžak (FBH)	017	Serbs	30	2.3
		Muslims	3	0.2
		Croats	1141	88.2
		Others	119	9.2
		All	1293	100
Domaljevac / Šamac (FBH)	020	Serbs	26	0.6
		Muslims	7	0.1
		Croats	4597	98.0
		Others	61	1.3
		All	4691	100
Bosanski Šamac / Šamac (RS)	021	Serbs	11928	53.9
		Muslims	2214	10.0
		Croats	5977	27.0
		Others	2005	9.1
		All	22124	100
Total		All	32960	

The 1991 population of Domaljevac / Šamac (FBH) was estimated at 4,691 individuals (Table 4), out of which 3,978 were at age 18 or more years in 1997 (Table 5a) and were eligible to vote. The eligible voters are the subjects of all analyses following in the next sections of this report.

Figure 1a. Ethnic composition in Domaljevac-Šamac (FBiH)
Pre- and post-war population

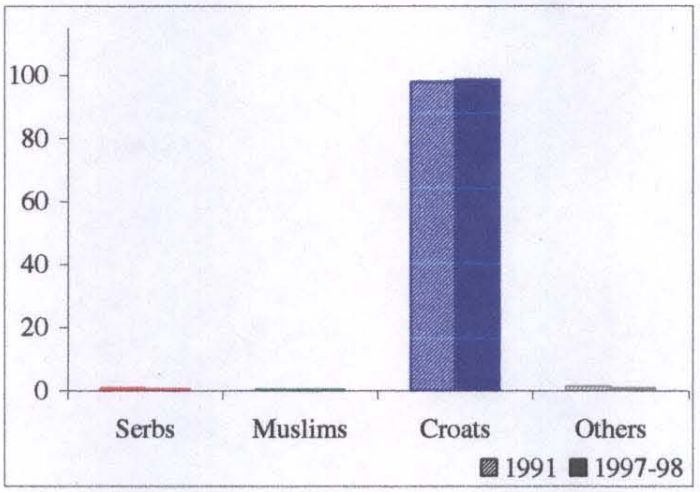


Table 5a. Ethnic composition in Domaljevac-Šamac (FBiH): pre- and post-war population (18 years of age or older)

Ethnicity	Absolute numbers		Percentages	
	1991 census	1997-98 voters register	1991 census	1997-98 voters register
Serbs	26	6	0.65	0.40
Muslims	7	4	0.18	0.27
Croats	3891	1473	97.81	98.46
Others	54	13	1.36	0.87
Total	3978	1496	100.00	100.00

The population of Domaljevac / Šamac (FBH) was in 1991 dominated by Croats (about 98%; Figure 1a and Table 5a). The 1997-98 ethnic composition of the Domaljevac / Šamac population, as estimated from our sample of 1,496 registered voters, was practically the same as the 1991 composition, that is dominated by Croats in 98.5 per cent.

It is striking that the remaining ethnic groups were weakly represented among the 1997-98 voters, which may indicate that these groups were largely absent in the area of Domaljevac in 1997-98. This conclusion is further supported by rather infrequent returns of Muslims and Serbs to Domaljevac / Šamac (FBH) in 1996-97. UNHCR reports that there were in total 124 minority returns in this area (95 Muslims and 29 Serbs).

Worth noting is that Figure 1a and Table 5a illustrate the changes in the ethnic composition that occurred in the population which *de facto* lived in the area of Domaljevac Šamac in 1991 or 1997-98. The perspective of "de facto population" focuses on the individuals who physically resided in this area by 1997-98 and ignores the fact how many of these individuals originally belonged to Domaljevac Šamac (i.e. lived in Domaljevac Šamac in 1991), and how many of them were newcomers from other municipalities in Bosnia and Herzegovina. Tracing the fate of the 1991 population of Domaljevac Šamac is however essential for the understanding of the scale of population movements from the municipality where this population originally lived.

In order to trace the post-war fate of the individuals who in 1991 resided in Domaljevac Šamac, we grouped the 1997-98 voters originating from Domaljevac Šamac (i.e the voters who lived there in 1991) due to the place where they registered to vote in 1997-98. Three types of residence were distinguished: this municipality (i.e. Domaljevac Šamac), other municipalities in Bosnia and Herzegovina, and other countries (including Croatia, Slovenia and FRY). The results of this analysis are shown in Figure 1b and Table 5b.

Figure 1b. Registered 1997 voters originating from Domaljevac-Šamac (FBiH) by ethnicity and place of registration

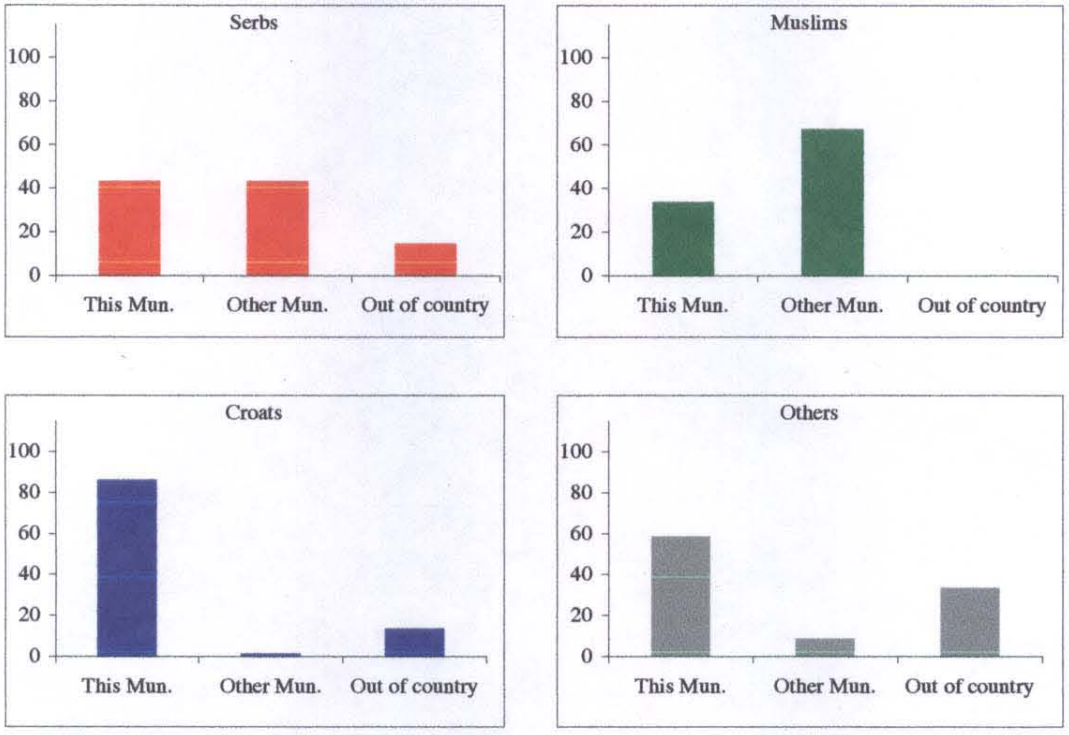


Table 5b and Figure 1b clearly confirm that the vast majority of the Croat voters who lived in Domaljevac in 1991, registered to vote in Domaljevac in 1997-98 (some 1,271 or 85.7% out of the 1,483 registered). Some 198 Croat voters resided abroad in 1997-98, some of them in Croatia (27 voters) and many in other countries (171 voters). These results indicate that the population movements were indeed minor in Domaljevac Šamac and that the original 1991 population remained relatively intact in this municipality.

Table 5b. Registered 1997-98 voters originating from Domaljevac-Šamac (FBiH) by ethnicity and place of registration

Ethnicity	Absolute numbers			
	This municipality	Other municipalities	Out of country	Total
Serbs	3	3	1	7
Muslims	1	2	0	3
Croats	1271	14	198	1483
Others	7	1	4	12

Ethnicity	Percentages			
	This municipality	Other municipalities	Out of country	Total
Serbs	42.86	42.86	14.29	100.00
Muslims	33.33	66.67	0.00	100.00
Croats	85.70	0.94	13.35	100.00
Others	58.33	8.33	33.33	100.00

The second municipality created in the Dayton Peace Accords of the pre-war area of Bosanski Šamac is the Serb Bosanski Šamac. Below we have analysed the changes in the ethnic composition in the Serb Šamac using the same methods as previously applied to Domaljevac Šamac (FBH).

Figure 2a. Ethnic composition in Bosanski Šamac / Šamac (RS)
Pre- and post-war population

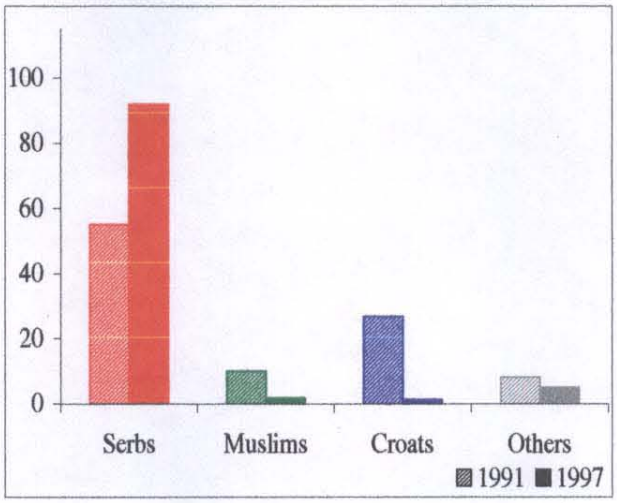


Table 6a. Ethnic composition in Bosanski Šamac / Šamac (RS): pre- and post-war population (18 years of age or older)

Ethnicity	Absolute numbers		Percentages	
	1991 census	1997 voters register	1991 census	1997 voters register
Serbs	10454	10362	55.07	91.85
Muslims	1902	194	10.02	1.72
Croats	5062	145	26.66	1.29
Others	1566	581	8.25	5.15
Total	18984	11282	100.00	100.00

The municipality of Šamac (RS) was predominantly Serb in 1991. The Serb majority amounted to 55% whereas Croats were the second largest ethnic group at 27% and Muslims represented only 10% of the total 1991 population (Figure 2a and Table 6a). In 1997 Serbs dominated at about 92% and the remaining ethnic groups had almost disappeared (Croats 1.3% and Muslims 1.7%). The results for 1997 are based on a large and reliable sample of voters (11,282 voters linked with the census). The above results indicate that a large scale ethnic cleansing occurred in Šamac (RS). Almost all Croats and Muslims moved out from this municipality. Those who left their homes during the war had not yet returned in 1997 to their pre-war place of residence. The UNHCR statistics on minority returns in 1996-97 support our conclusion: for Šamac (RS) no returns were reported in 1996-97.

Figure 2b. Registered 1997 voters originating from Bosanski Šamac / Šamac (RS) by ethnicity and place of registration

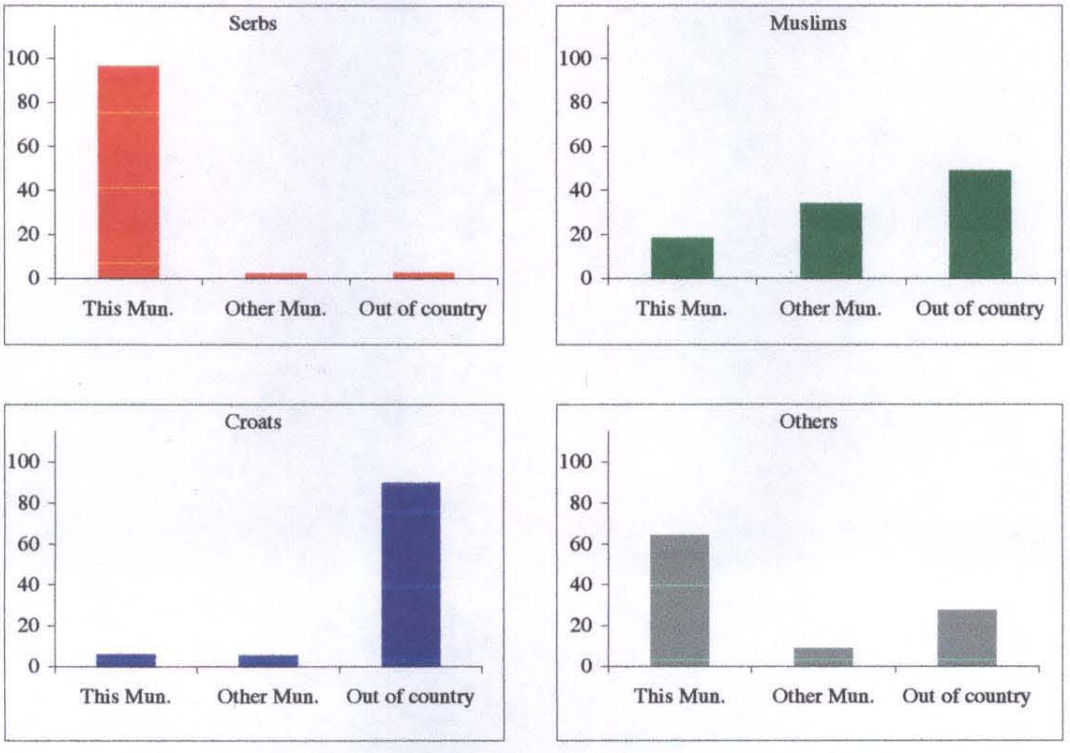


Table 6b. Registered 1997 voters originating from Bosanski Šamac / Šamac (RS) by ethnicity and place of registration

Ethnicity	Absolute numbers			
	This municipality	Other municipalities	Out of country	Total
Serbs	6528	128	142	6798
Muslims	187	349	505	1041
Croats	104	93	1674	1871
Others	394	52	168	614

Ethnicity	Percentages			
	This municipality	Other municipalities	Out of country	Total
Serbs	96.03	1.88	2.09	100.00
Muslims	17.96	33.53	48.51	100.00
Croats	5.56	4.97	89.47	100.00
Others	64.17	8.47	27.36	100.00

Out of the original 1991 population of Šamac (RS), i.e. 18,984 of those born up to 1979 (i.e. eligible to vote in 1997), we were able to identify some 10,324 individuals in the 1997 voters register (Table 6b; the sum of "Total"). Among those 10,324 individuals, some 7,213 persons registered in Šamac (RS) in 1997, some 622 in other municipalities in BH, and some 2,489 in other countries. The vast majority of those identified were Serbs (6,798); Croats were the second largest group (1,871) and Muslims the third (1,041). Striking is the fact that about 96% of the identified Serbs stayed in Šamac (RS) in 1997. The Croats who stayed in Šamac (RS) constituted only about 6% of all identified, the remaining Croats moved to other municipalities in BH (5%) or abroad (89%). Only 18% of Muslims stayed in Šamac, 34% of Muslims moved to other BH municipalities and 49% went to other countries.

The specific directions of population movements from Šamac (RS) are shown in Figure 2c, which comprises those voters who registered to vote in other municipalities in Bosnia and Herzegovina. Those who left Šamac and moved to other municipalities within Bosnia and Herzegovina were mainly Muslims (34%).

Muslims from Šamac (RS) went to the neighbouring Orašje (FBH), and to Rahić / Ravne (the Federation part of the Brčko District). In the north-east of the country, they also registered in Gračanica (FBH), Čelić (FBH), Tuzla (FBH), and Banovići (FBH). Muslims were also found in 1997 in Sarajevo (Novi Grad and Centar, FBH) and in Bosanski Petrovac (FBH).

Croats mainly moved from Šamac (RS) to the neighbouring municipalities located in the Federation, that is to Orašje (FBH), Odžak (FBH), and Domaljevac / Šamac (FBH), but also to Stolac (FBH) and Čaplijna (FBH) located at the border with Croatia.

Serbs who left Šamac went to Brčko, Bijeljna, Modriča, and Banja Luka (all in RS).

Figure 2c. Displacements from Bosanski Šamac / Šamac (RS)

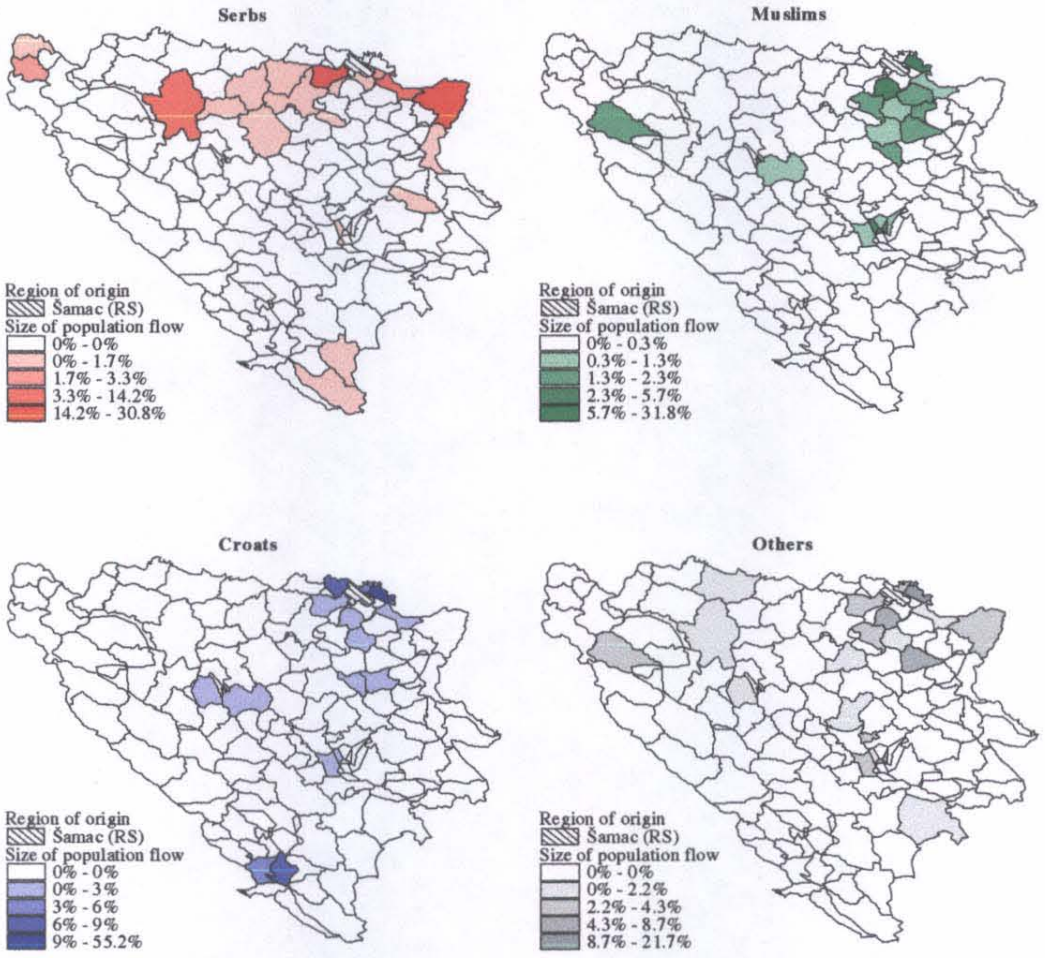


Table 7 summarises the emigration (i.e. out-migration) from the (pre-war) municipality of Bosanski Šamac. It is striking that out of 3,339 persons who left the municipality and in 1997 still lived in locations different from their pre-war place of residence which in addition were outside the borders of Bosnia and Herzegovina, the largest group (some 2,507) were Croats. About 1,602 (64%) of all Croat migrants went obviously to Croatia. Some 901 (36%) of Croat migrants lived in 1997 in countries outside the area of the former Yugoslavia.

The second largest group of migrants from Bosanski Šamac were Muslims (475 migrants). Some 433 (91%) of Muslim migrants went to countries different than Croatia or the Federal Republic of Yugoslavia.

The out-migration of Serbs and Others from Bosanski Šamac was relatively low.

Table 7. Emigration from Bosanski Šamac, 1991-1997

Ethnicity	FRY	Croatia	Other countries	Total
Serbs	86	4	76	166
Muslims	10	32	433	475
Croats	4	1602	901	2507
Others	25	47	119	191
TOTAL	125	1685	1529	3339

Ethnicity	FRY	Croatia	Other countries	Total
Serbs	51.8	2.4	45.8	100.0
Muslims	2.1	6.7	91.2	100.0
Croats	0.2	63.9	35.9	100.0
Others	13.1	24.6	62.3	100.0
TOTAL	3.7	50.5	45.8	100.0

Source: The 1997 voters register and the 1991 population census for BH

3.2 Odžak

The population of Odžak increased from about 20,000 in 1948 to some 30,000 in 1991 (Table 8). Croats were the dominating ethnic group in 1991 with about 54% of the population, whereas Muslims and Serbs were two minorities with, respectively, about 21 and 19 % shares. A comparison of the 1991 ethnic composition with the post-war figures obtained from the voters register shows that no major changes occurred: in 1997 the share of Croats was still the highest (about 50%), and that of Muslims and Serbs were 26% and 20% respectively (Table 9). The fraction of Serbs remained more-or-less unchanged between 1991 and 1997.

Table 8. The total population of Odžak since 1948

1948	1953	1961	1971	1981	1991
19827	20554	22364	25901	27895	30056

Source: Stanovnistvo Bosne i Hercegovine. CROSTAT, Zagreb, Travanj 1995

Table 9. Ethnic composition of Odžak in 1981, 1991, and 1997

Year	Total	Croats	Muslims	Serbs	Others
1981	27895	15430	5371	5361	1733
1981	100.0	55.3	19.3	19.2	6.2
1991	30056	16338	6220	5667	1831
1991	100.0	54.4	20.7	18.9	6.1
1997(18+)	11252	5645	2923	2201	483
1997 (18+)	100.0	50.2	26.0	19.6	4.3

Source: Stanovnistvo Bosne i Hercegovine. CROSTAT, Zagreb, Travanj 1995

Table 9 has the same shortcoming as the analogous Table 3 for Bosanski Šamac, where the ethnic composition for 1991 is given for the whole population (i.e. including all ages) whereas for 1997 only for those at age 18 or more years. The next disadvantage of Table 9 is that it does not make it possible to assess population movements within the municipality of Odžak. In order to present a more precise picture of the changes in Odžak, we have analysed the ethnic composition in this area in 1991 and 1997 at the level of two post-Dayton municipalities originating from the pre-war Odžak (Odžak (FBH) and Odžak/Vukosavlje (RS)).

Table 10 shows the ethnic composition in the two post-Dayton municipalities, Odžak (FBH) and Odžak/Vukosavlje (RS). Both the Federal and the Serb Odžak were created basically from the area of the pre-war Odžak. However, a few extra settlements belonging in 1991 to the neighbouring municipalities of Modriča and Bosanski Šamac became parts of the new Odžaks in the Dayton Peace Accords. Specifically speaking, since 1995 the Federal Odžak included one extra settlement (Prud) from Bosanski Šamac, and the Serb Odžak included three settlements (Pećnik, Jakeš, and Modrički Lug) that were under Modriča administration in 1991. As the post-Dayton municipalities are the subject of the discussion in this and next section, we have included the extra settlements in the

analysis. In Table 10 we however also distinguish the part of each Odžak that has been reconstituted from the pre-war Odžak (i.e. *without extra settlements* from Modriča and Bosanski Šamac).

Worth noting is also that the town of Odžak (with 9,384 citizens in 1991) and two settlements, Potočani and Vrbovac, could not be included in the reconstituted population of the post-Dayton Federal and Serb Odžak municipalities (see "split settlements" in Table 10). These three settlements, with the total population of 13,356 persons, were divided between the political entities and we could not assign the population living there to neither of the two new post-Dayton municipalities.

In 1991 the Federal Odžak consisted of a total of 9 settlements and had a population of 15,943 individuals (out of which 14,650 were from the original Odžak, and the rest from Bosanski Šamac). In 1991, Croats were the vast majority with 75% of the total population. There were about 22% Serbs living in the Federal Odžak. Other ethnic groups amounted together to about 3 per cent.

The RS part, Odžak/Vukosavlje, included 6 settlements with the total population of 7,116 individuals (out of which 2,050 persons lived in the original Odžak, and the rest in Modriča). The pre-war ethnic structure comprised almost equal fractions of Croats and Muslims (about 40% each) and some 18% of Serbs in this area. Others were represented at about 4.5 per cent.

For both municipalities in 1991 the ethnic composition of the 18+ population was very close to the above mentioned structures for the all age population (compare Tables 10, 11, and 12 below).

Table 10. The 1991 ethnic composition in the post-Dayton municipalities of Odžak (FBH) and Odžak/Vukosavlje (RS). Reconstituted from the pre-war Odžak and all components

Post-Dayton Municipality	OSCE Code	Ethnicity	Reconstituted from the pre-war Odžak		All components	
			Total	Percent	Total	Percent
Split settlements		Serbs	1061	7.9	na	na
		Muslims	6197	46.4	na	na
		Croats	4836	36.2	na	na
		Others	1262	9.4	na	na
		All	13356	100.0	na	na
Odžak (FBH)	017	Serbs	3472	23.7	3502	22.0
		Muslims	10	0.1	13	0.1
		Croats	10770	73.5	11911	74.7
		Others	398	2.7	517	3.2
		All	14650	100.0	15943	100.0
Odžak / Vukosavlje (RS)	018	Serbs	1133	55.3	1279	18.0
		Muslims	7	0.3	2859	40.2
		Croats	728	35.5	2655	37.3
		Others	182	8.9	323	4.5
		All	2050	100.0	7116	100.0
Total		All	30056	100.0	na	na

Note: "na" is "not applicable"

Figure 3a. Ethnic composition in Odžak (FBiH)
Pre- and post-war population

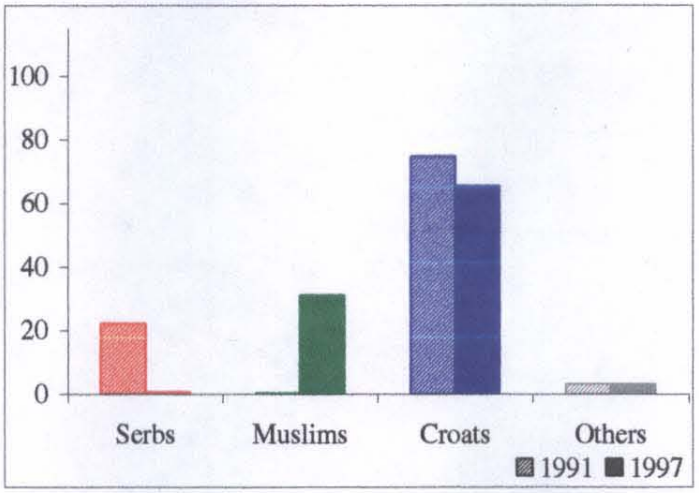


Table 11a. Ethnic composition in Odžak (FBiH): pre- and post-war population
(18 years of age or older)

Ethnicity	Absolute numbers		Percentages	
	1991 census	1997 voters register	1991 census	1997 voters register
Serbs	3000	28	22.06	0.48
Muslims	13	1794	0.10	30.95
Croats	10174	3791	74.80	65.40
Others	414	184	3.04	3.17
Total	13601	5797	100.00	100.00

The ethnic structure of the Federal Odžak was dominated by Croats in 1991 (75%; Figure 3a and Table 11a), but a considerable representation of Serbs (22%) also lived there. In 1997 Croats were less frequent but still in majority (65%), and Serbs disappeared completely (0.5%). The fraction of Muslims, practically absent in Odžak in 1991, increased in 1997 up to 31 per cent.

In order to depict the post-war residence of the original 1991 population of Odžak (FBH), we again traced this population among the 1997 voters and showed their 1997 place of registration to vote in Figures 3b, 3c and Table 11b below. Table 11b indicates that significant population movements occurred between 1991 and 1997 from Odžak (FBH). In our sample of 5,854 voters who in 1991 resided in Odžak (FBH) there were 3,087 voters who in 1997 registered outside the Odžak (FBH) municipality. Some 1,279 voters registered in other municipalities in Bosnia and Herzegovina, and some 1,808 voters in other countries. Croats and Serbs were the largest groups that left Odžak (FBH) and lived elsewhere in 1997. Croats stayed outside Bosnia and Herzegovina in 1997, and Serbs lived in other municipalities in Republika Srpska (most commonly in the neighbouring Bosanski Šamac,

Modriča, and Odžak/Vukosavlje; see Figure 3c). Croats however were also the largest group which stayed in Odžak (FBH) in 1997.

Figure 3b. Registered 1997 voters originating from Odžak (FBiH) by ethnicity and place of registration

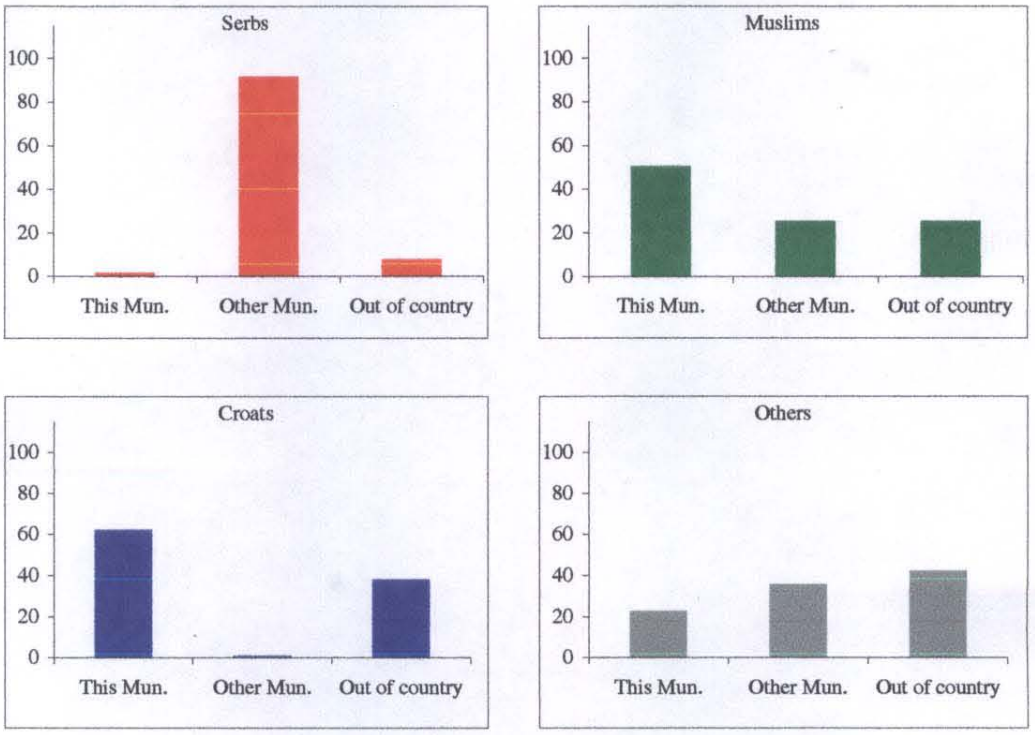
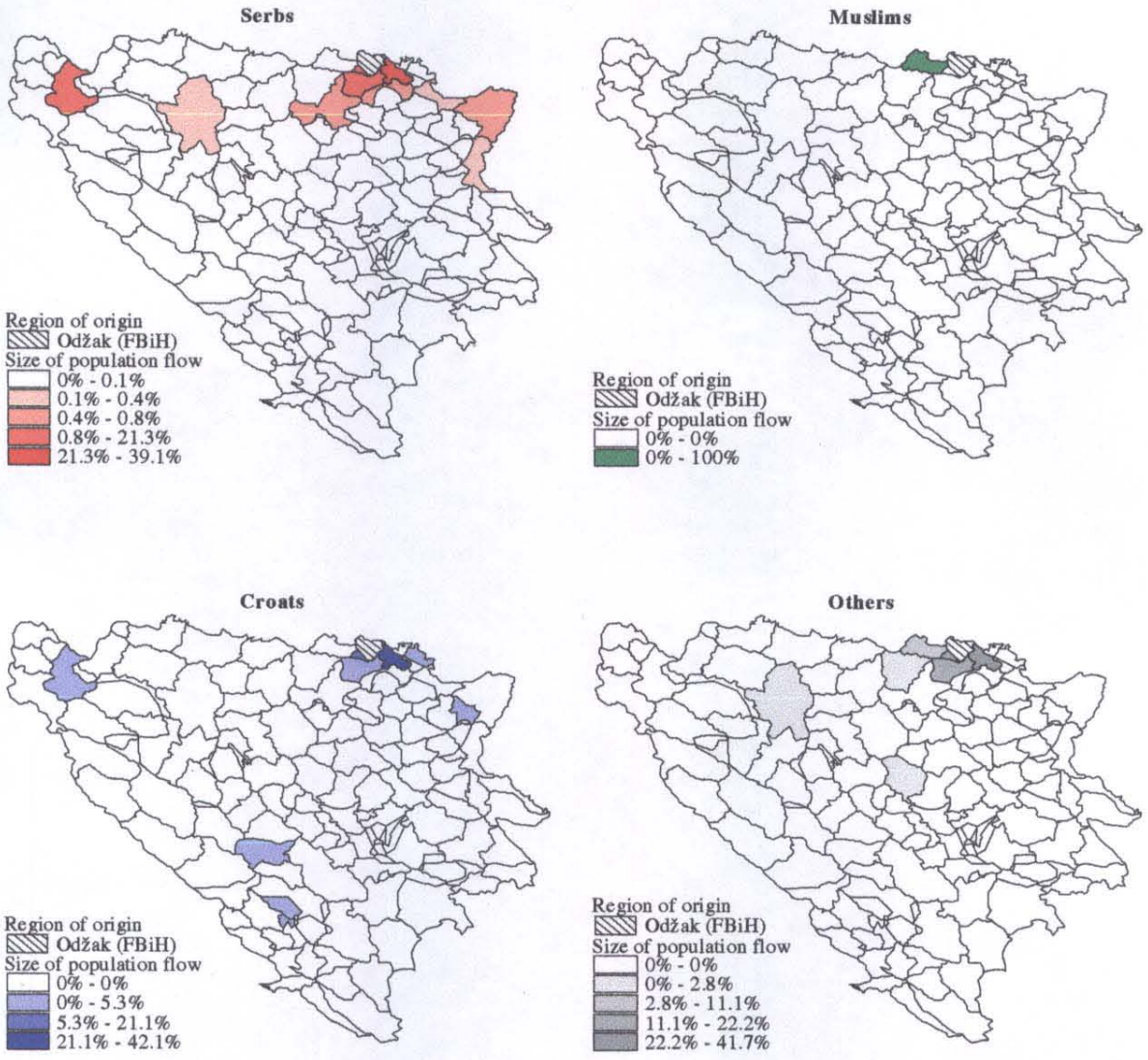


Table 11b. Registered 1997 voters originating from Odžak (FBiH) by ethnicity and place of registration

Ethnicity	Absolute numbers			
	This municipality	Other municipalities	Out of country	Total
Serbs	16	1218	100	1334
Muslims	2	1	1	4
Croats	2725	22	1662	4409
Others	24	38	45	107

Ethnicity	Percentages			
	This municipality	Other municipalities	Out of country	Total
Serbs	1.20	91.30	7.50	100.00
Muslims	50.00	25.00	25.00	100.00
Croats	61.81	0.50	37.70	100.00
Others	22.43	35.51	42.06	100.00

Figure 3c. Displacements from Odžak (FBH)



The ethnic composition of the Serb Odžak/Vukosavlje changed in a different way than the composition of the Federal Odžak. In 1991, both the Croats and the Muslims were the two dominant groups in Odžak / Vukosavlje (RS), each at about 38% of the total population, and Serbs were in a minority at approximately 19 per cent (Figure 4a and Table 12a). In 1997 Serbs were the majority group (93%) whereas Croats and Muslims almost completely disappeared. Others remained at about 5% as in 1991. These dramatic declines in the fraction of Croats and Muslims make it important to check how many of them left the municipality and where they went.

Figure 4b and Table 12b confirm that about 93% of Serbs did not move out from Odžak/ Vukosavlje (RS) but still lived here in 1997. Croats and Muslims largely left and moved to other municipalities in FBH, or abroad. There were in total 1,209 Muslims in our sample of 2,624 of all identified 1997 voters originating from the 1991 Odžak (RS). They all moved out from Odžak (RS) and lived elsewhere in 1997 (about 31% moved to other municipalities in the Federation of Bosnia and Herzegovina and 69% to other countries).

Figure 4a. Ethnic composition in Odžak / Vukosavlje (RS): pre- and post-war population

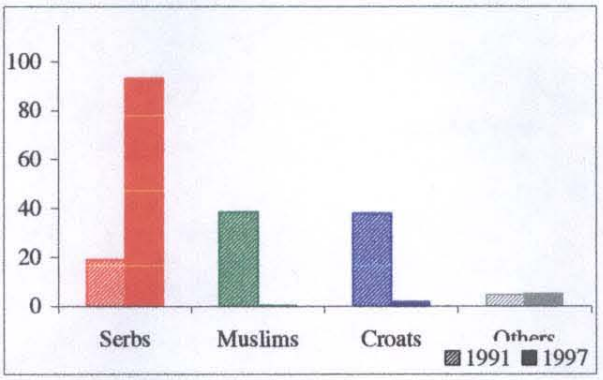


Figure 4b. Registered 1997 voters originating from Odžak / Vukosavlje (RS)
by ethnicity and place of registration

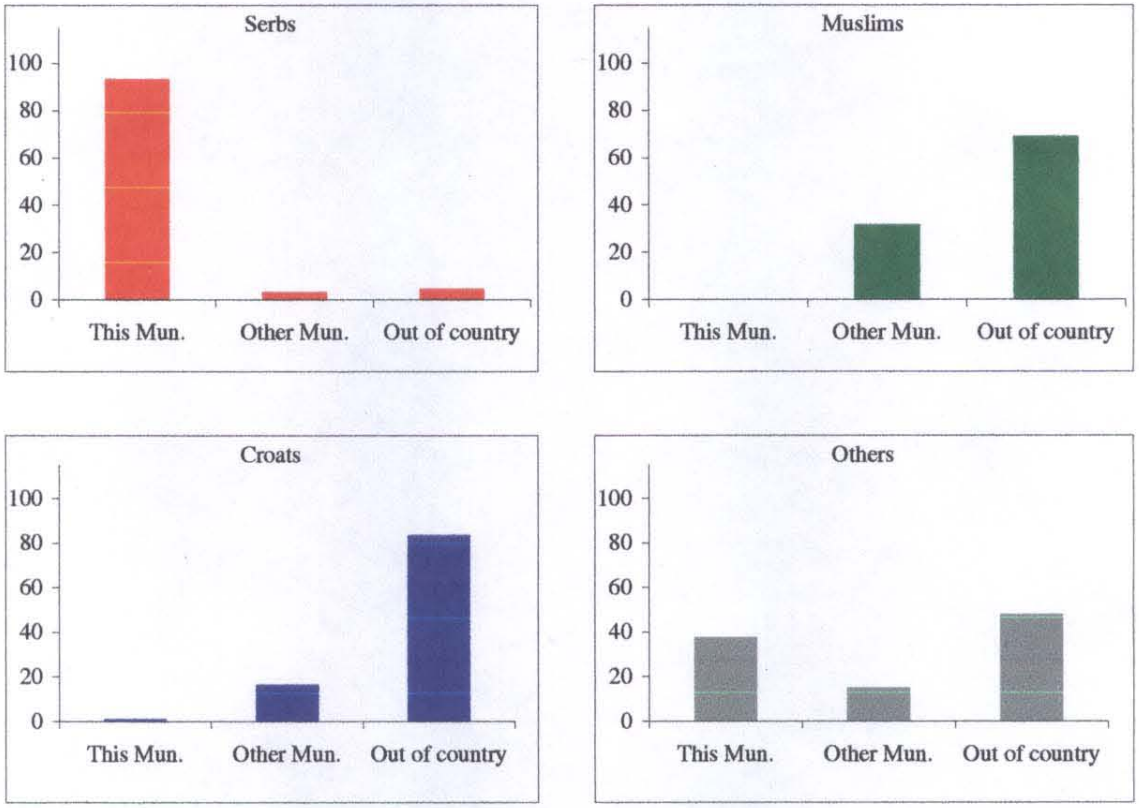


Table 12a. Ethnic composition in Odžak / Vukosavlje (RS): pre- and post-war population (18 years of age or older)

Ethnicity	Absolute numbers		Percentages	
	1991 census	1997 voters register	1991 census	1997 voters register
Serbs	1113	1169	19.03	93.22
Muslims	2250	1	38.46	0.08
Croats	2215	21	37.86	1.67
Others	272	63	4.65	5.02
Total	5850	1254	100.00	100.00

Table 12b. Registered 1997 voters originating from Odžak / Vukosavlje (RS) by ethnicity and place of registration

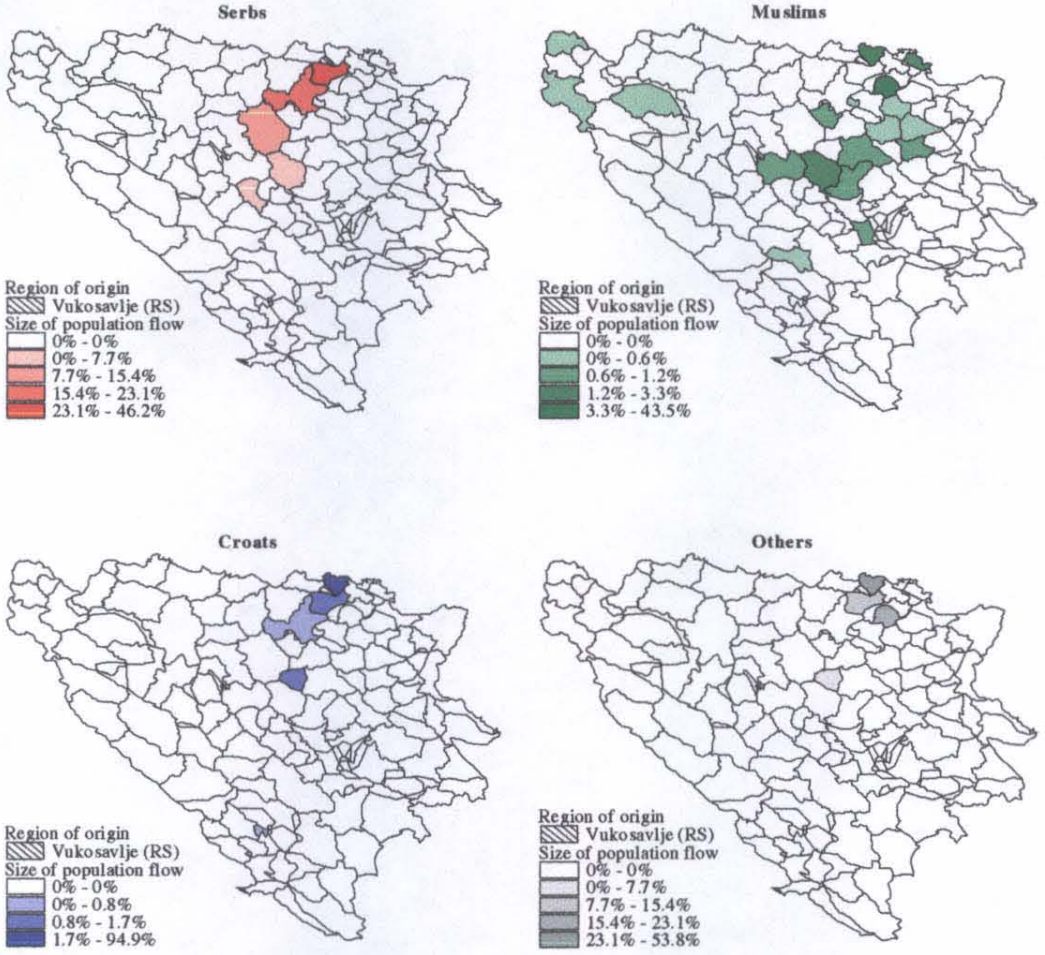
Ethnicity	Absolute numbers			
	This municipality	Other municipalities	Out of country	Total
Serbs	480	15	22	517
Muslims	0	379	830	1209
Croats	6	130	674	810
Others	33	13	42	88

Ethnicity	Percentages			
	This municipality	Other municipalities	Out of country	Total
Serbs	92.84	2.90	4.26	100.00
Muslims	0.00	31.35	68.65	100.00
Croats	0.74	16.05	83.21	100.00
Others	37.50	14.77	47.73	100.00

The number of Croats amongst the 2,624 identified voters from Odžak (RS) was 810. Some 804 of them registered to vote outside the Serb Odžak (some 16.1 % in other municipalities in BH and 83.2 % abroad).

Figure 4c further shows that Croats mainly moved to Odžak (FBH) and Žepče (FBH), and also to Modriča (RS) and Doboj (RS). Muslims moved to the neighbouring Odžak (FBH), Orašje (FBH), Gradačac (FBH), and to Zenica and surrounding Donji Vakuf, Kakanj and Zavidovići in Central Bosnia (all FBH).

Figure 4c. Displacements from Odžak/ Vukosavlje (RS)



Finally, we also analysed the emigration (called also out-migration) from the (pre-war) Odžak. It appeared the emigration was mainly of Croats. Out of 3,886 individuals who left Odžak and lived in 1997 outside Bosnia and Herzegovina, some 2,212 were Croats. The second largest group of migrants were Muslims (1,306). Some 64% of Croat migrants lived in countries outside the former Yugoslavia and some 36% in Croatia. Almost all Muslim migrants (98%) lived in countries outside the former Yugoslavia in 1997.

Similarly to Bosanski Šamac, the out-migration of Serbs and Others was minor compared with Croats and Muslims.

Table 13. Emigration from Odžak, 1991-1997

Ethnicity	FRY	Croatia	Other countries	Total
Serbs	106	9	63	178
Muslims	3	25	1278	1306
Croats	7	802	1403	2212
Others	35	29	126	190
TOTAL	151	865	2870	3886

Ethnicity	FRY	Croatia	Other countries	Total
Serbs	59.6	5.1	35.4	100.0
Muslims	0.2	1.9	97.9	100.0
Croats	0.3	36.3	63.4	100.0
Others	18.4	15.3	66.3	100.0
TOTAL	3.9	22.3	73.9	100.0

3.3 Final Conclusion

Summing up, two clear examples of ethnic cleansing have been shown in this report: Croats and Muslims largely disappeared from the Serb Šamac and from the Serb Odžak / Vukosavlje. Before the war in both these areas Croats and Muslims represented a considerable fraction of the actual population.

Using the 1991 population census and the 1997-98 OSCE voters register, we were able to conform the identity of 2,458 displaced persons (Tables 5b, 6b, 11b, and 12b) and 7,225 refugees (Tables 7 and 13) from the pre-war municipalities of Bosanski Šamac and Odžak. These numbers are minimum estimates of all those who fled during the war period and in 1997 still lived outside their 1991 place of residence. These minimum numbers do not include the population below age 18 years and all those who did not registered to vote.

ANNEX

The Ethnic Composition in Bosnia and Herzegovina in 1991 and 1997-98

The Annex contains a set of maps showing the pre-war (1991) ethnic distribution in Bosnia and Herzegovina and the post-war (1997) ethnic composition of this population.

The results are based on the 1991 census population and on information from the 1997 and 1998 voter registers. As a rule, the figures from the 1997 voters register are shown. Figures for 1998 are only provided in case the 1997 data are not available due to changes in the municipal division of the country between 1997 and 1998[2]. The figures are given in terms of post-war municipalities, i.e. are based on the municipal division as introduced in the Dayton Peace Agreement[3]. For the voters, place of registration to vote was taken as their place of residence in 1997-98. The population of voters should be seen as a sample and not as the exact figure of the post-war population size. Nevertheless, as at the municipal level the sample is large, the estimates obtained of population fractions (e.g. by ethnicity) are reliable.

Information on 1997-98 voters has been linked at the individual level with the census records. In this way we have assured that the voters with established links are real individuals who did live in Bosnia and Herzegovina in 1991. An overview of this part of the original BH population, which has been identified in the 1997-98 voters register, is presented in Table 1 below:

Table 1. The 1991 Population Identified in the 1997-98 Voters Register

	Serbs	Muslims	Croats	Others	ALL
Identified 1997/98	573 683	864 174	245 696	104 512	1 788 065
Of which:					
- in the same municipalities	407 280	567 931	179 605	75 315	1 230 131
	71.0%	*65.7%*	*73.1%*	*72.1%*	*68.8%*
- in other municipalities	161 310	154 328	35 366	16 097	367 101
	28.1%	*17.9%*	*14.4%*	*15.4%*	*20.5%*
- outside BH	5 093	141 915	30 725	13 100	190 833
	0.9%	*16.4%*	*12.5%*	*12.5%*	*10.7%*

Note. Only persons with valid municipality codes (including Out-of-Country) have been considered

[2] Municipalities where the 1998 figures are provided instead of the 1997 ones, are marked with small asterisks (*) in Figure 1b.

[3] An OSCE municipality conversion chart has been used (version as at 25.05.1998) for bridging the pre- and post-war municipal divisions. However, one municipality (Bužim) was established later in 1998 and is therefore not included in the conversion chart. Moreover, for a number of settlements there was no clear rule of classification, as it depended on the precise address of voters. Such settlements (including parts of Sarajevo and Mostar) had to be excluded from the analysis, with the exception of results shown in Figure 1b. Such areas are marked with an orange colour in Figures 1a and 2a.

As no data about population displacements is available for the war period (1992-1995), results presented in this Annex should be merely seen as an overall illustration of all war-related ethnic changes sensu largo and the conclusions should not be extrapolated to any particular period of time within the 1991-1997/98 frame.

This overview consists of two sets of maps. Figures 1a and 1b show the ethnic majority in municipalities in 1991 and 1997-98, respectively. Dark colours denote municipalities with an absolute majority (more than 50%) of one ethnic group (red - Serbs, green - Muslims, blue - Croats), light colours – relative majority (less than 50%, but still dominant and having at least 5% majority over the second largest group). Mixed colours denote municipalities with no clear domination of one ethnic group.

Figures 2a, 2b, 2c and 2d illustrate the population distribution by municipality in Bosnia and Herzegovina before the war, in 1991, showing absolute numbers of Serbs, Muslims, Croats and Others, respectively.

Finally, Figure 3 is a reference map of post-war municipalities and entities in BH. The respective municipal codes are explained in Table 2.

Regarding the maps, several remarks are worth mentioning:

- Map 1a indicates there were large areas in Bosnia and Herzegovina where Serbs, Muslims and Croats were in absolute majority in 1991. The Serbs lived mainly in the northwest and southeast of the country, the Muslims in the central part, middle east and northwest, and the Croats in the southwest and northeast of the country. Remarkably, in many other areas the ethnic composition was mixed and ethnic groups lived together. The ethnically mixed areas were located within the ethnically homogenous areas.
- Map 1b shows that by 1997 the ethnically mixed areas disappeared completely from the ethnic composition of Bosnia and Herzegovina. The 1997 ethnic composition of Bosnia and Herzegovina consisted of three ethnic majority areas: the absolute majority of Serbs (the northwest, northeast, and all east of BH), the absolute majority of Muslims (central BH and the north-west of BH), and the absolute majority of Croats (the south of BH).
- Striking is that the geographic location of the Serb majority strictly conforms to the area of Republika Srpska, and the location of the Muslim and Croat majority to the area of the Federation of Bosnia and Herzegovina. The Dayton line is drawn on Map 1b just by the borders of ethnic majorities.
- Maps 2a to 2d illustrate the actual residence of four major ethnic groups in Bosnia and Herzegovina in 1991. It is obvious that before the war the ethnic groups were spread all over the country and lived in almost all municipalities of Bosnia and Herzegovina. The geographic distribution of the ethnic groups likely changed between 1991 and 1997 as only large population movements would result in the new ethnic composition shown on Map 1b.

Figure 1a. Ethnic Majority in BH in 1991, Post-Dayton Municipalities

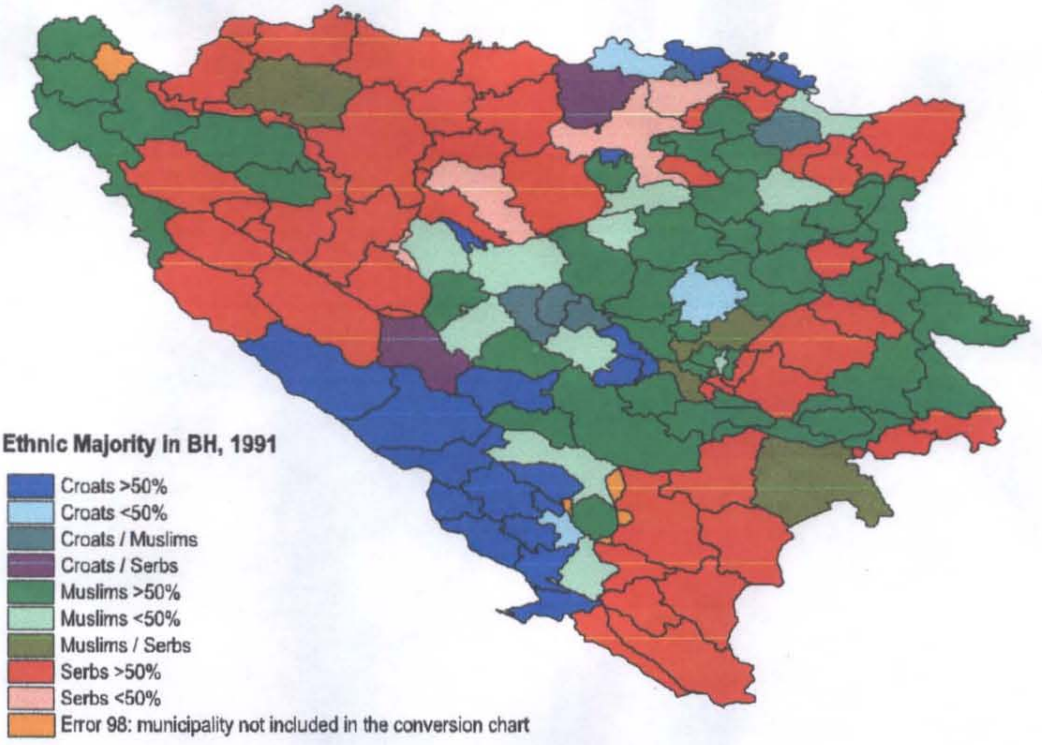


Figure 1b. Ethnic Majority in BH in 1997 / 98, Post-Dayton Municipalities

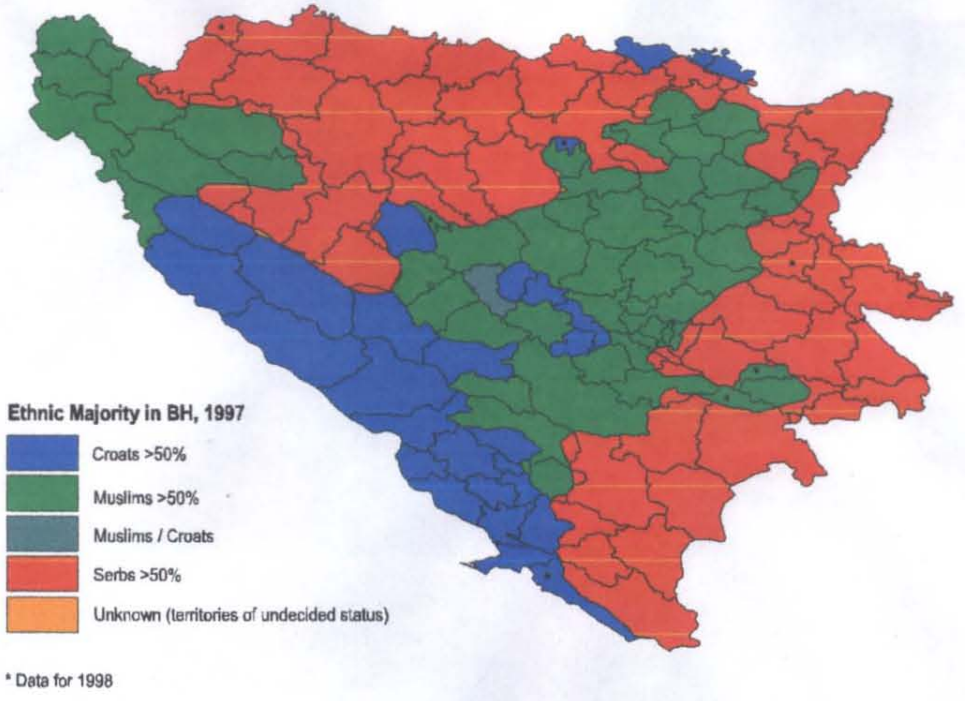


Figure 2a. Geographic Distribution of Serb Population in 1991, Post-Dayton Municipalities

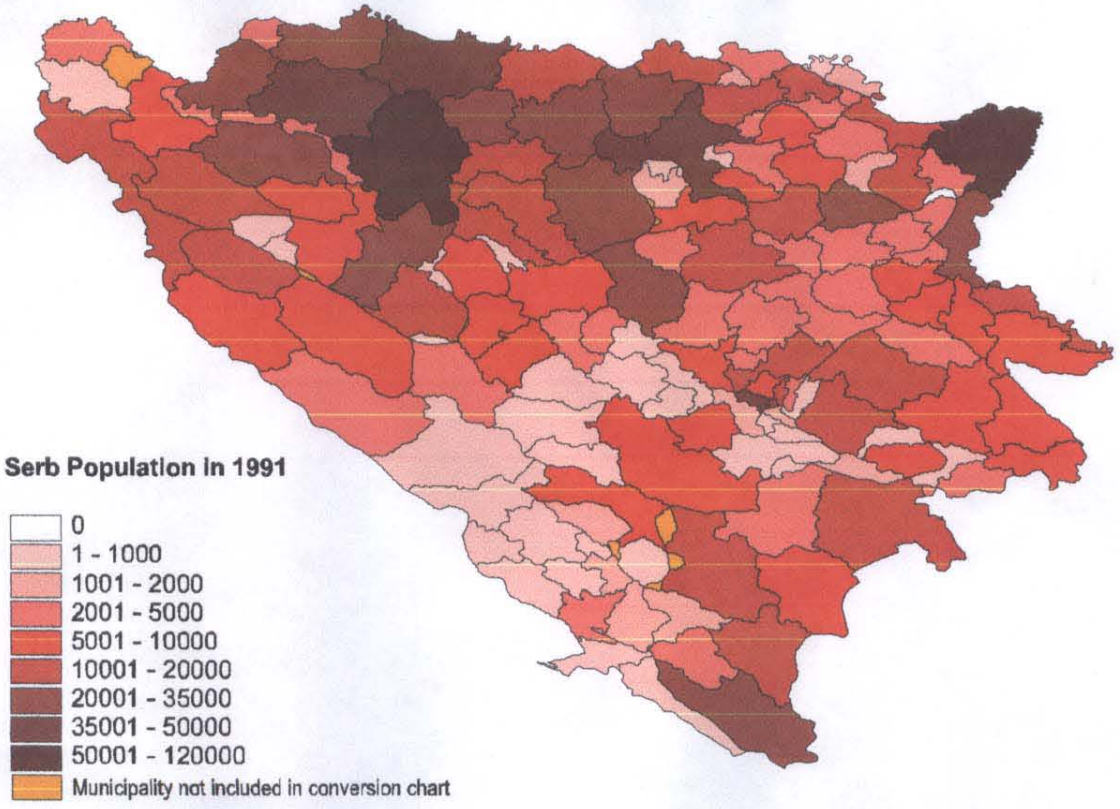


Figure 2b. Geographic Distribution of Muslim Population in 1991, Post-Dayton Municipalities

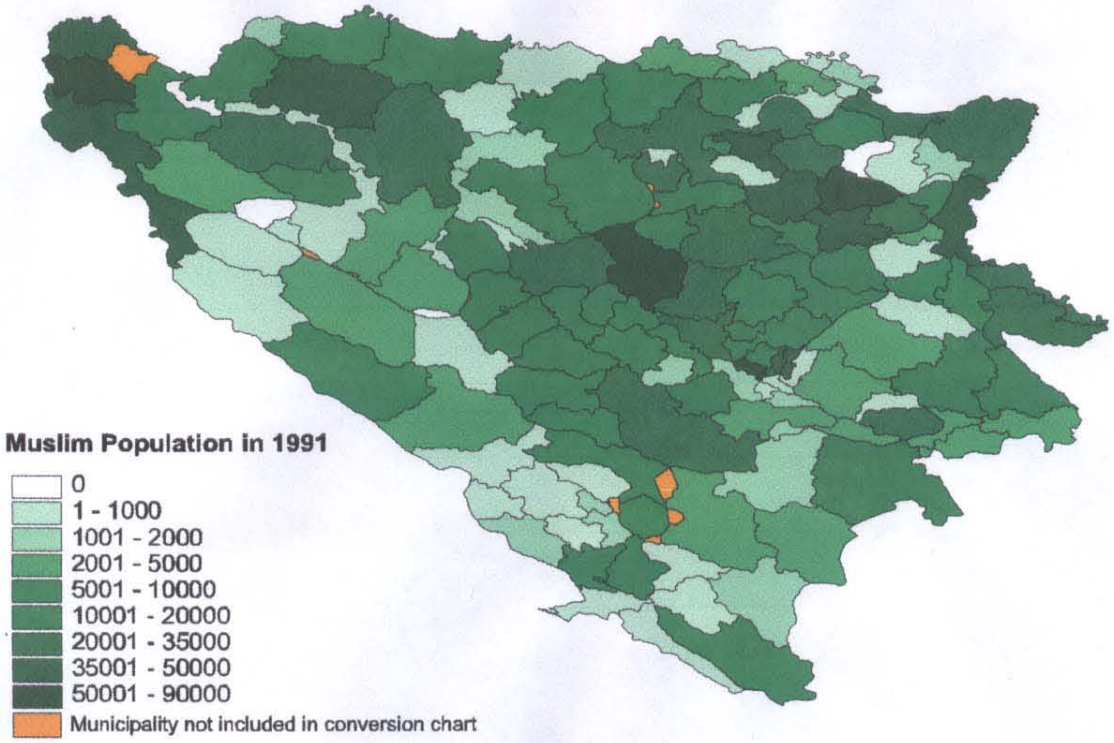


Figure 2c. Geographic Distribution of Croat Population in 1991, Post-Dayton Municipalities

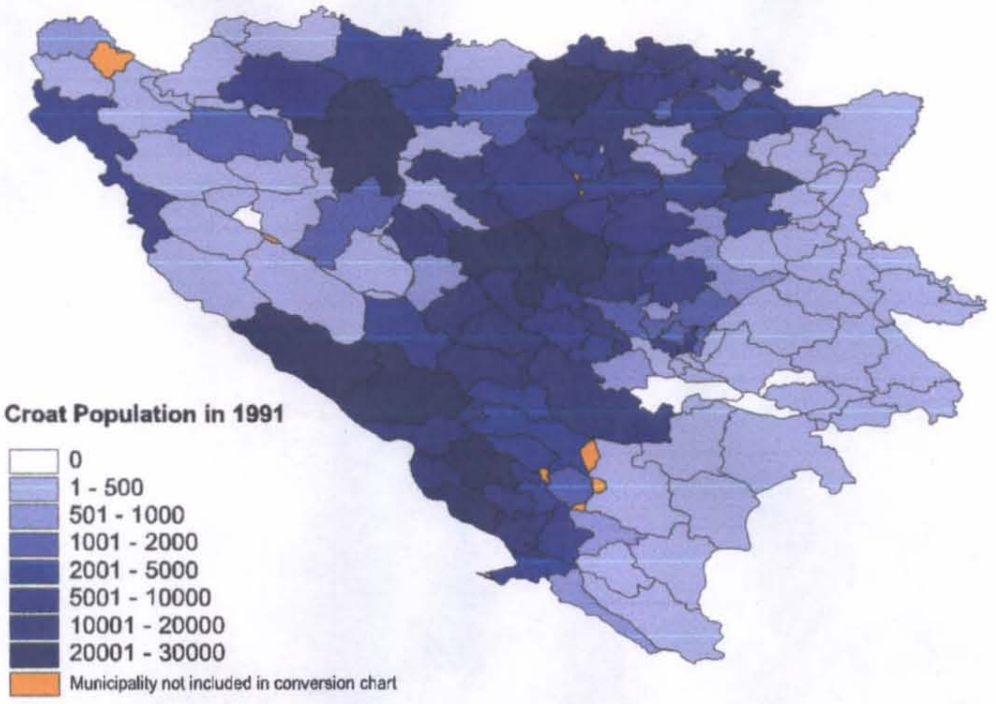


Figure 2d. Geographic Distribution of Others Population in 1991, Post-Dayton Municipalities

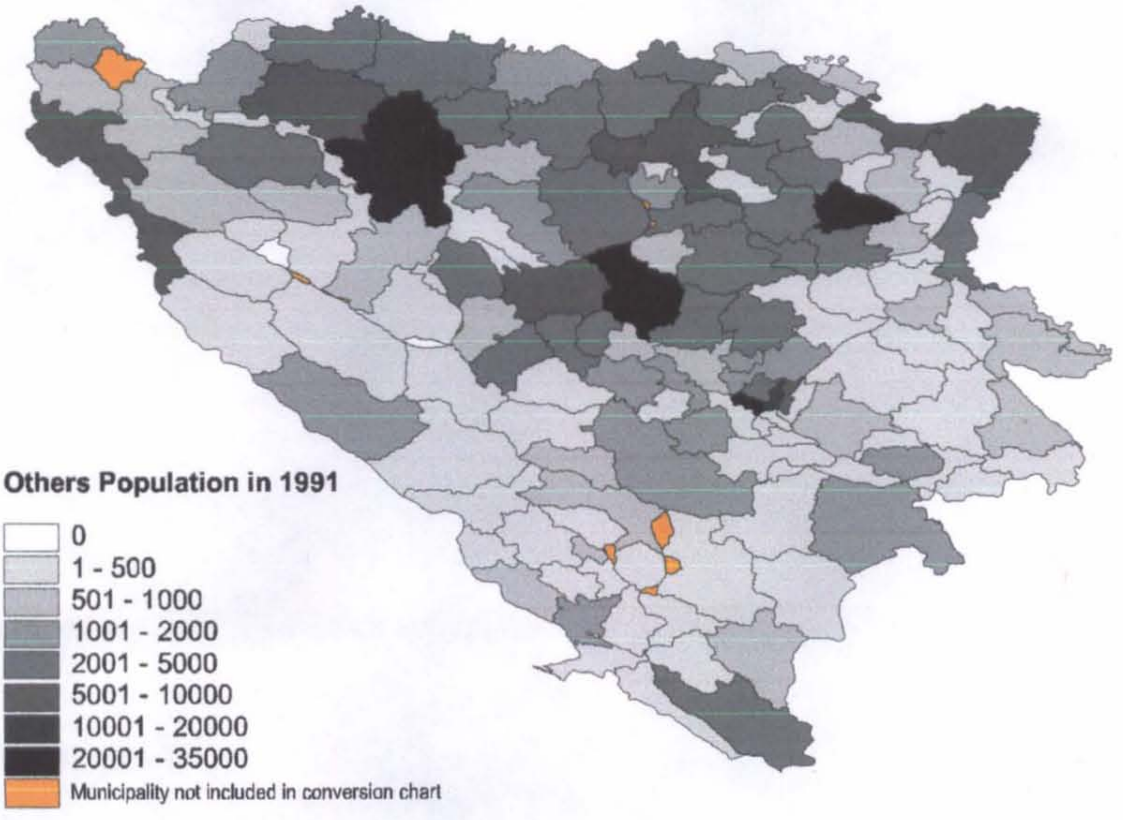
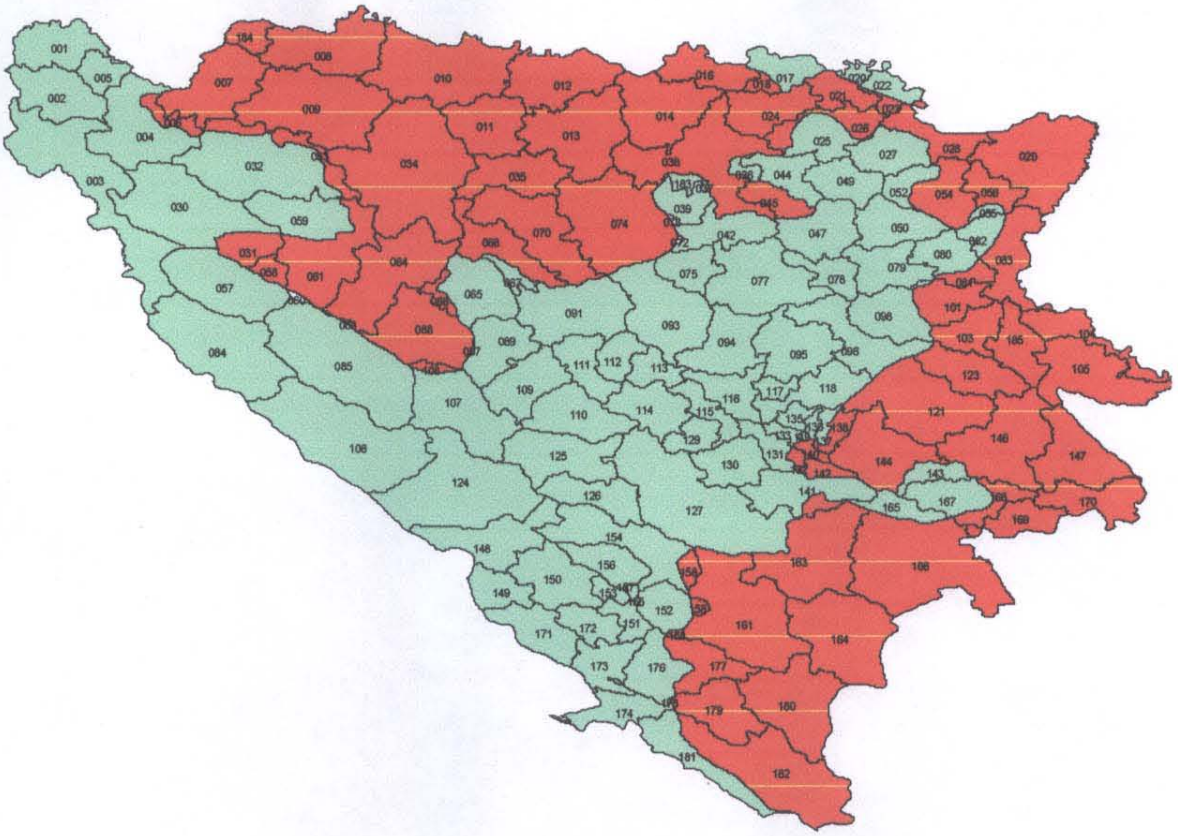


Figure 3. Municipalities and Political Entities in BH – Reference Map



■ - Republika Srpska ■ - The Federation of Bosnia and Herzegovina

For a list of municipality codes please refer to the table on the next page.

Table 2. Post-Dayton municipality codes

Code	Name	Entity	Code	Name	Entity
001	Velika Kladuša	FBiH	066	Jajce / Jezero	RS
002	Cazin	FBiH	067	Dobretići	FBiH
003	Bihać	FBiH	068	Skender Vakuf / Kneževo	RS
004	Bosanska Krupa	FBiH	070	Kotor Varoš	RS
005	Bužim	FBiH	074	Teslić	RS
006	Bosanska Krupa / Krupa na Uni	RS	075	Žepče	FBiH
007	Bosanski Novi / Novi Grad	RS	077	Zavidovići	FBiH
008	Bosanska Dubica / Kozarska Dubica	RS	078	Banovići	FBiH
009	Prijedor	RS	079	Živinice	FBiH
010	BosanskaGradiška / Gradiška	RS	080	Kalesija	FBiH
011	Laktaši	RS	081	Kalesija / Osmaci	RS
012	Srbac	RS	082	Sapna	FBiH
013	Prnjavor	RS	083	Zvornik	RS
014	Derventa	RS	084	Bosansko Grahovo / Grahovo	FBiH
016	Bosanski Brod / Srpski Brod	RS	085	Glamoč	FBiH
017	Odžak	FBiH	088	Šipovo	RS
018	Odžak / Vukosavlje	RS	089	Donji Vakuf	FBiH
020	Domaljevac - Šamac	FBiH	091	Travnik	FBiH
021	Bosanski Šamac / Šamac	RS	093	Zenica	FBiH
022	Orašje	FBiH	094	Kakanj	FBiH
023	Orašje / Srpsko Orašje	RS	095	Vareš	FBiH
024	Modriča	RS	096	Olovo	FBiH
025	Gradačac	FBiH	098	Kladanj	FBiH
026	Gradačac / Pelagićevo	RS	101	Šekovići	RS
027	Rahić / Ravne (Brčko Federation)	FBiH	103	Vlasenica	RS
028	Brčko	RS	104	Bratunac	RS
029	Bijeljina	RS	105	Srebrenica	RS
030	Bosanski Petrovac	FBiH	106	Livno	FBiH
031	Bosanski Petrovac / Petrovac	RS	107	Kupres	FBiH
032	Sanski Most	FBiH	108	Kupres / Srpski Kupres	RS
033	Sanski Most / Srpski Sanski Most	RS	109	Bugojno	FBiH
034	Banja Luka	RS	110	Gornji Vakuf	FBiH
035	Čelinac	RS	111	Novi Travnik	FBiH
036	Doboj - Istok	FBiH	112	Vitez	FBiH
037	Doboj - Jug	FBiH	113	Busovača	FBiH
038	Doboj	RS	114	Fojnica	FBiH
039	Tešanj	FBiH	115	Kiseljak	FBiH
042	Maglaj	FBiH	116	Visoko	FBiH
044	Gračanica	FBiH	117	Breza	FBiH
045	Gračanica / Petrovo	RS	118	Ilijaš	FBiH
047	Lukavac	FBiH	121	Sokolac	RS
049	Srebrenik	FBiH	123	Han Pijesak	RS
050	Tuzla	FBiH	124	Tomislavgrad	FBiH
052	Čelić	FBiH	125	Prozor / Prozor-Rama	FBiH
054	Lopare	RS	126	Jablanica	FBiH
055	Teočak	FBiH	127	Konjic	FBiH
056	Ugljevik	RS	129	Kreševo	FBiH
057	Drvar	FBiH	130	Hadžići	FBiH
058	Drvar / Srpski Drvar	RS	131	Ilidža	FBiH
059	Ključ	FBiH	132	Ilidža / Srpska Ilidža	RS
061	Ključ / Ribnik	RS	133	Novi Grad Sarajevo	FBiH
064	Mrkonjić Grad	RS	135	Vogošća	FBiH
065	Jajce	FBiH	136	Centar Sarajevo	FBiH

Reference table of municipality codes - continued

Code	Name	Entity
137	Stari Grad Sarajevo	FBiH
138	Stari Grad Sarajevo / Srpski Stari Grad	RS
139	Novo Sarajevo	FBiH
140	Novo Sarajevo / Srpsko Novo Sarajevo	RS
141	Trnovo (FBiH)	FBiH
142	Trnovo (RS)	RS
143	Pale (FBiH)	FBiH
144	Pale (RS)	RS
146	Rogatica	RS
147	Višegrad	RS
148	Posušje	FBiH
149	Grude	FBiH
150	Široki Brijeg	FBiH
151	Mostar Jug	FBiH
152	Mostar Jugoistok	FBiH
153	Mostar Jugozapad	FBiH
154	Mostar Sjever	FBiH
155	Mostar Stari grad	FBiH
156	Mostar Zapad	FBiH
157	Mostar Central District	FBiH
158	Mostar / Srpski Mostar	RS
161	Nevesinje	RS
163	Kalinovik	RS
164	Gacko	RS
165	Foča	FBiH
166	Foča / Srbinje	RS
167	Goražde	FBiH
168	Goražde / Srpsko Goražde	RS
169	Čajniče	RS
170	Rudo	RS
171	Ljubuški	FBiH
172	Čitluk	FBiH
173	Čapljina	FBiH
174	Neum	FBiH
176	Stolac	FBiH
177	Stolac / BerkovićI	RS
179	Ljubinje	RS
180	Bileća	RS
181	Ravno	FBiH
182	Trebinje	RS
183	Usora	FBiH
184	Kostajnica	RS
185	Milići	RS