

# **DNA RESULTS AND RECOMMENDATIONS FOR FURTHER ACTIVITIES**

**ADDENDUM TO REPORT OF THE INVENTORY OF THE  
IDENTIFICATION CENTRE IN GORAŽDE (ICMP.FSD.AA.719.1.DOC)**

**Distribution:**

Restricted

Sarajevo, 13 November 2015

ICMP.FSD.AA.719R.1.ADD1.W.doc

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Forensic investigations concerning missing persons, including investigations concerning mass graves, other illicit burial sites and human remains they contain, are conducted under the authority of competent domestic institutions. This Summary Report presents findings and observations made by ICMP as part of the technical assistance it provides to these institutions. The competent institutions may contact ICMP for any additional information that ICMP may be able to provide. Parts of this Summary Report or its exhibits may have been redacted to protect the integrity of investigations and the privacy of persons.

## I. EXECUTIVE SUMMARY

1. The NN review at Goražde Identification Centre was agreed in March 2014, with preliminary case record gathering and re-sampling work undertaken in March-April 2014. The inventory of all cases began on 12 May 2014. The work followed the procedure detailed by the Prosecutor of the Bosna-Podrinje Canton. A report describing the aims and objectives, organization, methods, undertaken activities, and preliminary results was completed for submission to the Prosecutor's Office (PO) of the Bosna-Podrinje Canton. This addendum to the main report is compiled to provide an update on case status following DNA testing of previously submitted bone samples with subsequent phase II activities performed, and outlines further necessary examination, re-association, and identification activities to be undertaken.
2. During the inventory at Goražde Identification Centre, 106 of a total of 111 body bags were thoroughly examined and reviewed. The remaining five cases were not previously autopsied and therefore have not been included in the NN inventory. The status of each body bag was determined. The body bags were found to contain a total of 191 distinguishable bodies and/or body parts. Some of the bags contain remains of multiple individuals. Seven bags (6.6%) apparently had not been sampled before. 112 new DNA samples were taken. It should be noted that out of these, 78 DNA samples were taken in March 2014 by the pathologist in charge of the cases as part of the NN work, but as a prelude to the full NNWG review of cases.
3. As a result, 74 DNA profiles were successfully obtained; 48 (65%) have positive matches with blood reference samples, and 26 (35%) have profiles but there are no matches to reference blood samples.
4. Positive matches provided three new identities as a direct result of NN review at the Goražde mortuary. It is important to note that an additional 10 new identities were also obtained on cases examined as part of the NN review and that had been exhumed and examined in April and July 2014 and sampled by the pathologist at the outset of the NN process.
5. Three re-associations were performed on the three new identities within phase II work undertaken in December 2014. There are 17 other re-associations with cases previously identified and buried. Additionally 10 re-associations are needed with cases where the storage location are currently unknown to International Commission on Missing Persons (ICMP), and 5 re-associations with skeletal remains stored in other mortuaries. There were 12 'bone to bone' re-associations made for samples which have profiles but no matches to reference blood samples.
6. The reason 35% of samples did not have a match with reference blood samples is either due to these remains not being related to the conflict of the 1990s, or because there are no living relatives to provide a blood reference sample, or because families did not provide a reference blood sample because their missing family member was identified by presumptive "traditional" means.
7. There were 38 bone samples that failed to provide DNA profile (33% of all samples). These were re-examined to determine if the cases can be re-sampled and only 2 samples have been resubmitted.
8. With the obtained DNA results, further examination measures were undertaken as phase II of the NN case review during December 2014 with agreement between all parties of NNWG and under instructions of the PO of the Bosna-Podrinje Canton. These consisted of re-examinations

and reviews of the case records, additional investigative information and re-associations based on DNA results.

9. The DNA results obtained provided the basis for a total of 42 re-associations of body parts and bodies (including those described in point 4 above). Of these ICMP performed 6 re-associations which were straightforward matches within the same examined case, while 36 required re-associations of skeletal elements between different cases. It is recommended additional anthropological checks, examination and processing are undertaken, including the re-exhumations of connecting cases.
10. Of the 42 re-association matches discovered by DNA testing, 17 relate to cases already identified/named through DNA. Further re-associations will need to be performed, and there is no conclusive information on burial status of these 17 DNA identified/named cases. Missing Persons Institute of BIH (MPI) investigators have stated that all of these cases were previously buried. The ICMP team found no cases pertaining to these named missing persons at the Goražde Identification Centre. If it is determined the cases are buried, then the families should be notified to determine next steps, which may involve exhumation and requisite court orders. Re-exhumed cases are likely to need DNA sampling if it is determined that there are mis-associated body parts present. Additionally, DNA results showed that 10 re-associations are needed with body parts which couldn't be found at the Goražde Identification Centre. These cases have to be investigated and located.
11. The initial case review phase at Goražde Identification Centre determined 14 possible historic cases. No matches with blood reference samples have been made to these cases for which DNA samples have been taken and processed. Policy should be established on mechanisms for potential case closure of probable historical cases.
12. Once re-associations of cases with DNA match reports are finalized and completed, identifications can be made and identified persons returned to families. The total number of such cases is yet to be determined.

## **II. BACKGROUND**

13. Under the instruction of the Chief Prosecutor of BIH and the order of the Chief Prosecutor of the Federation of BIH, the PO of the Bosna-Podrinje Canton ordered a review, in March 2014, of cases stored at the Identification Centre in Goražde with the support of the ICMP. The inventory of all cases began at Identification Centre in Goražde on 12th May 2014. A report describing the aims and objectives, organization, methods, undertaken activities, and preliminary results was produced for the PO of the Bosna-Podrinje Canton by the ICMP.
14. The strategy and process for the inventory which was developed by ICMP based on the analysis of case status and issues found at Podrinje Identification Project (PIP), Krajina Identification Project (KIP), Sutina, Mostar and Nevesinje facilities was followed after the agreement with the Bosna-Podrinje Canton Prosecutor. The review revealed an under-estimate of total cases (bodies and body parts) housed at the facility due to the fact that many body bags contain more than one case of human remains. Certain cases which were previously named/identified were found to contain unrelated skeletal elements or elements that were previously mis-associated. This finding further complicates all subsequent activities related to these mortal human remains.
15. During the inventory at Identification Centre in Goražde, 106 of the total of 111 body bags were thoroughly examined and reviewed. The remaining five cases were not autopsied previously or

during NN review therefore ICMP did not include these in the review process after consultations with Prosecutor's Office of BiH (POBiH). The MPI and the Prosecutor had been following the practice of counting one body bag as one "case." The status of each body bag was determined and 47 (44.3%) required an immediate change of case status due to the inventory review.

16. The body bags were found to contain a total of 191 distinguishable bodies and/or body parts. Some of the body bags contain remains of multiple individuals. Seven bags (6.6%) had not apparently been sampled before, and 34 new DNA samples were taken. An additional 78 bone samples were previously taken by Dr. Tuco, before formal examination of the bodies began.

### **III. TESTING OF BONE SAMPLES**

17. 74 DNA profiles were successfully obtained from the bone samples, with the following results:
  - 48 (64.9%) have positive matches with blood reference samples, and DNA match reports have been issued relating to named missing persons; and
  - 26 (35.1%) have profiles but there are no matches to reference blood samples.
18. Within the successfully obtained DNA profiles, the following results were obtained:
  - 3 new identities;
  - 27 re-associations to cases previously identified and/or named using DNA matches;
  - 12 "bone to bone" re-associations out of which 4 have a match with bones/body parts which could not be found at Goražde Identification Centre.
19. The main reasons for bone samples having no matches are:
  - the remains are not related to the conflict of the 1990s;
  - there are no living relatives to provide a blood reference sample;
  - families did not provide a reference blood sample because their missing family member was identified through presumptive identification utilizing "traditional" means, and his/her mortal remains were repatriated to the family and buried.
20. 38 bone samples failed to provide a DNA profile, a 33.9% failure rate (of all submitted samples). ICMP assessed these cases for possibility to re-submit bone samples and has found that only 2 samples can be re-submitted, and these were taken and sent for DNA testing during phase II activities.

### **IV. PHASE II ACTIVITIES**

21. Thanks to the very encouraging results from the testing, phase II required a fairly large amount of work (the workflow is described further in section VI) in order to be able to assess and work out requirements for closing or updating the status of each individual case. This required re-examination of cases, including the data from DNA analysis, the case review forms, anthropological examination data, autopsy notes, and additional investigative information. This resulted in re-association of cases or parts of cases, separation of cases, recommendations for exclusion of certain cases from investigation, and recommendations for further activities for remaining open cases.

#### **4.1. Re-associations**

22. Through the DNA testing of bone samples, anthropological assessments, and case investigation,

it has been determined that 42 re-associations of body parts and bodies can be performed as the result of the review. Of these, there are:

- 17 re-associations with already identified and buried persons;
- 10 re-associations with DNA named skeletal elements/sets for which ICMP has no information on where the remains are stored;
- 12 re-associations of skeletal elements with obtained DNA profiles but without match to reference samples;
- 3 re-associations on newly generated names.

23. The final number of re-associations with already identified and buried cases can be determined only after additional information is provided on the status of the remains of the 10 named individuals for whom additional DNA re-associations were discovered. If further investigation indicates that some of the 10 persons for whom the DNA reports were generated are identified and buried, then re-exhumations would permit assessment of buried cases and further re-examinations and re-associations. If mis-associations and mis-identifications are observed or suspected from those examinations, further DNA sampling and case investigation would be needed to resolve these issues. The same is applicable for the 17 re-associations with generated names on the persons for which ICMP was provided information on the identification and burial from the MPI investigators. Additionally, ICMP has found 36 cases/skeletal sets with associated DNA reports on names of persons who were previously identified and buried (see section 6 of the main *Report of the Inventory of the Identification Centre in Goražde, ICMP.FSD.AA.719.1.doc*). Bone samples from these skeletal elements were taken prior to the NNWG review, however ICMP received additional information on locations of burials for some of these persons during the phase II activities. The information has to be checked by MPI investigators in order to determine further steps for resolution of these cases.

24. Identifications can be performed following the completion of relevant re-associations of cases with DNA match reports. Families will be able to receive the identified remains of their loved ones. The number of such cases is not yet known, as there are many variables which will determine case status, as described above (also see Annex 4 of the main *Report of the Inventory of the Identification Centre in Goražde, ICMP.FSD.AA.719.1.doc*).

25. In order to conduct scientific re-associations with cases that have been buried, the cases will have to be re-exhumed, preceded by family permissions and court orders. Those buried cases will need re-examination and comprehensive analysis of all records in order to determine the recommended actions. These can include DNA sampling, adding, replacing, or removing skeletal elements. Based on previous experience of cases with this status, additional bone sampling is often required to verify associations of skeletal elements. ICMP has prepared these cases for re-associations and further activities will depend on the local authorities' agreements and instructions.

#### **4.2. Possible historic cases**

26. The initial case review phase at the Identification Centre in Goražde determined that there are 14 possible historic cases. Out of these, 2 bone samples were taken from one previously un-sampled case and from one case where previous DNA extractions failed, to account for the possibility that these cases were in fact conflict-related. However, one sample provided no match, while for the other DNA extraction failed.

27. A discussion is needed regarding these cases to ascertain whether further investigation and

potential testing can add more certainty to their status as cases not related to the 1990-1995 conflict, as well as to determine what level of evidence is required by the PO, pathologists, and MPI to conclude they are relevant to the missing person's mandate.

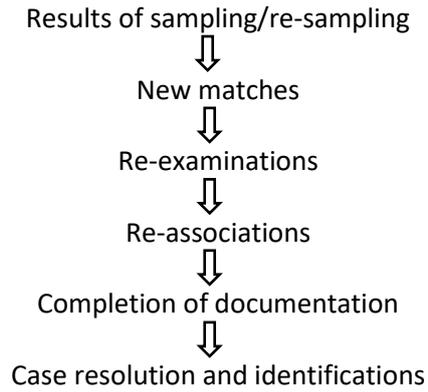
## **V. ORGANISATION OF PHASE II ACTIVITIES**

28. The ICMP provided assistance in the undertaking of re-examinations in December 2014, and related re-association activities within the scope of the agreed process (see section VI below) under the direction of the prosecutor, together with MPI, pathologists, and the police. The ICMP team used the same workspace used during phase I.
29. All updated case details on examined cases were entered into a database, so that findings can be more easily managed, analyzed, and updated.
30. Re-exhumation of cases, with the permission of the families and under a court order, should be coordinated by the prosecutor, MPI, and pathologists. This can be described as phase III. It should be noted that the re-exhumed bodies may be complex cases with one body bag containing multiple individuals.
31. The team will likely need to return to the facility over time to advise on and assist with completion of all re-examinations and further activities according to the outstanding DNA results.
32. A summary of the findings of phase II activities was generated to show the number of examined and re-examined cases, their status, and samples taken. Cumulative tables like those in the Annex below should be included in reports following the completion of each phase.
33. Case records should be updated when any changes are made. It is recommended the Prosecutor's Office oversees and regularly checks case status and progress through a managed database system.
34. Cases categorized by status are listed in Annex 1, together with recommendations for further work. Case labels with tested bone codes are listed in tables so it is clear what needs to be done to resolve each of case.
35. It is recommended that further case work is not undertaken without appropriate staff, otherwise the organizational and case documentation issues identified in the main Report could be compounded (see *Report of the Inventory of the Identification Centre in Goražde, ICMP.FSD.AA.719.1.doc*).

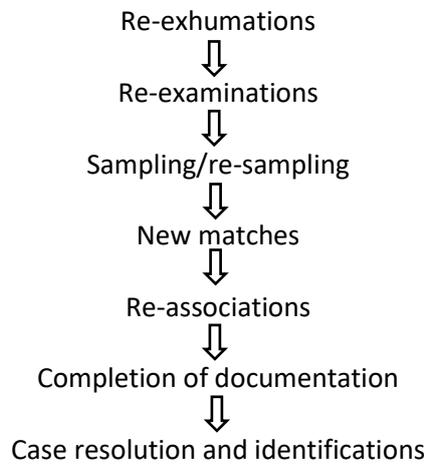
## **VI. PHASE II AND PHASE III WORKFLOW**

36. Phase II workflow is outlined below. It is subject to the approval of the prosecutor and other NNWG participants, and will include the implementation of decisions regarding the NN human remains following the phase I case review and inventory. It will lead to phase III and the necessary re-exhumations.

**Phase II summary**



**Phase III summary**



**ANNEX 1: Cases by status category and recommendations for further work**

**1. Probable historic cases unrelated to the recent 1992-1995 conflict**

Probable historic cases are considered to be those that have substantive indications of being unrelated to the recent conflict, and therefore fall outside of the scope of the search for missing persons. Various indicators have been taken into consideration, including personal belongings and clothes, prior information about the exhumation site, as well as bone taphonomy (post-mortem damage) that can indicate the age of these skeletal elements. Initial review and examination determined that there are 14 cases which fall into this category. Additionally, the ICMP team has determined that cases from the cave location [REDACTED] excavated on [REDACTED] [REDACTED] also fall under this category. There are 11 body bags of skeletal material containing 13 cases relating to this site. The ICMP team inventoried and assisted in DNA sampling of these cases during phase II activities in December 2014. In total for this skeletal assemblage 10 bone samples were taken at the insistence of the pathologist, out of which five failed DNA extraction while for the remaining five there are no matches with reference blood samples, which is consistent with the cases not being related to the current conflict.

No	Case number
1	[REDACTED]
2	[REDACTED]
3	[REDACTED]
4	[REDACTED]
5	[REDACTED]
6	[REDACTED]
7	[REDACTED]
8	[REDACTED]
9	[REDACTED]
10	[REDACTED]
11	[REDACTED]
12	[REDACTED]
13	[REDACTED]
14	[REDACTED]

*Table 1:  
List of cases determined to be unrelated to the recent conflicts.*

➤ **Recommendations**

Further investigation of prior background information about the exhumation sites is needed in order to reach final conclusions and case status resolutions. The potential applicability of additional testing methods such as C-14 and stable isotope testing of bones could be considered.

**2. Cases with DNA reports generated where final identifications should be possible**

The ICMP has separated 27 skeletal sets with generated DNA reports on missing persons where local authorities can finalize identification process with family members and deliver these cases for burial.

All outstanding re-associations have been performed and these cases need final review of the pathologists on the court order. Case files should be investigated prior final identification by relevant local authorities to ascertain whether these persons have been previously identified and buried. This list is compiled based on available information. ICMP does not have all documentation needed concerning these named persons. It is recommended local authorities check these names.

No	Case Label	DNA Samples
1	[REDACTED]	[REDACTED]
2	[REDACTED]	[REDACTED]
		[REDACTED]
		[REDACTED]
		[REDACTED]
3	[REDACTED]	[REDACTED]
		[REDACTED]
		[REDACTED]
4	[REDACTED]	[REDACTED]
		[REDACTED]
		[REDACTED]
		[REDACTED]
5	[REDACTED]	[REDACTED]
6	[REDACTED]	[REDACTED]
7	[REDACTED]	[REDACTED]
		[REDACTED]
		[REDACTED]
8	[REDACTED]	[REDACTED]
9	[REDACTED]	[REDACTED]
10	[REDACTED]	[REDACTED]
11	[REDACTED]	[REDACTED]
		[REDACTED]
		[REDACTED]
		[REDACTED]
12	[REDACTED]	[REDACTED]
		[REDACTED]
13	[REDACTED]	[REDACTED]
14	[REDACTED]	[REDACTED]
15	[REDACTED]	[REDACTED]
16	[REDACTED]	[REDACTED]
17	[REDACTED]	[REDACTED]
18	[REDACTED]	[REDACTED]
19	[REDACTED]	[REDACTED]
		[REDACTED]
20	[REDACTED]	[REDACTED]

21	[REDACTED]	[REDACTED]
22	[REDACTED]	[REDACTED]
23	[REDACTED]	[REDACTED]
24	[REDACTED]	[REDACTED]
25	[REDACTED]	[REDACTED]
26	[REDACTED]	[REDACTED]
27	[REDACTED]	[REDACTED]

\*Contact MPI for DNA Match Report data to link the names associated with the case bone samples.

Table 2:

List of cases for which the process of identification can be finalized and remains can be given to the family members for burial

➤ **Recommendations**

Local authorities should ascertain whether persons named on these cases have been previously identified and buried. Pathologists on the court order should review the cases and case files together with the anthropologists who were working on the revision. Local authorities should organize official identifications and hand over cases to family members for burial.

**3. Cases/skeletal elements with DNA matches with buried cases**

In Table 3 all cases connecting with buried cases for which there are DNA matches are listed. In total 19 names have been generated by DNA match reports which relate to 10 cases housed at the Identification Centre Goražde. By comparing available MPI documentation with results obtained, it was concluded it is likely that some remains of these persons have already been identified and buried utilizing DNA identification methods. Some of the cases originate from complex sites. It is possible that re-exhumations would be needed to re-associate the cases and check buried cases for possible duplication and/or mis-association of skeletal elements.

No	Case Label	DNA Samples at Identification Centre Goražde	Buried DNA Samples
1	[REDACTED]	[REDACTED]	[REDACTED]

2	[REDACTED]	[REDACTED]	[REDACTED]
3	[REDACTED]	[REDACTED]	[REDACTED]
4	[REDACTED]	[REDACTED]	[REDACTED]
5	[REDACTED]	[REDACTED]	[REDACTED]
6	[REDACTED]	[REDACTED]	[REDACTED]
7	[REDACTED]	[REDACTED]	[REDACTED]
8	[REDACTED]	[REDACTED]	[REDACTED]
9	[REDACTED]	[REDACTED]	[REDACTED]
10	[REDACTED]	[REDACTED]	[REDACTED]

<sup>1</sup> DNA reports on the childless brothers.

11	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]
12	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]
13	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]
14	[REDACTED]	[REDACTED]	[REDACTED]
15	[REDACTED]	[REDACTED]	[REDACTED]
16	[REDACTED]	[REDACTED]	[REDACTED]
17	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]
18	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]
19	[REDACTED]	[REDACTED]	[REDACTED]

\*Contact MPI for DNA Match Report data to link the names associated with the case bone samples.

*Table 3:  
List of cases/skeletal elements with DNA matches with buried cases.*

➤ **Recommendations**

Checks should be made by MPI to confirm whether these persons are buried, and the whereabouts of those burials. Family members should be contacted in order to approve re-exhumations of already identified and buried cases. After re-exhumations are performed, a systematic examination of cases and related documentation should take place with DNA sampling being employed.

Upon DNA testing, re-associations and identifications will be possible. It is possible that DNA testing of skeletal elements buried with identified persons will lead to new DNA matches

with already identified and buried cases. Anthropologists should be engaged to undertake the examination work.

**4. Cases/skeletal elements with DNA matches with cases not found in the Identification Centre Goražde**

In table 4 are listed all cases/skeletal sets for which DNA reports are generated on the names of missing persons for which ICMP did not have information on the storage or burial of previously DNA named skeletal sets. Within the table there is only one case which has no match to reference blood samples and with a bone to bone DNA match to a case which was not found in Goražde Identification Centre.

No	Case Label	DNA Samples at Identification Centre Goražde	DNA Samples relating to skeletal elements which have to be located
1	[REDACTED]	[REDACTED]	[REDACTED]
2	[REDACTED]	[REDACTED]	[REDACTED]
3	[REDACTED]	[REDACTED]	[REDACTED]
4	[REDACTED]	[REDACTED]	[REDACTED]
5	[REDACTED]	[REDACTED]	[REDACTED]
6	[REDACTED]	[REDACTED]	[REDACTED]
7	[REDACTED]	[REDACTED]	[REDACTED]
8	[REDACTED]	[REDACTED]	[REDACTED]
9	[REDACTED]	[REDACTED]	[REDACTED]
10	[REDACTED]	[REDACTED]	[REDACTED]
11	[REDACTED]	[REDACTED]	[REDACTED]

<sup>2</sup> The case without generated DNA report.

12	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	
		[REDACTED]	
13	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	
14	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]
15	[REDACTED]	[REDACTED]	[REDACTED]
16	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]
17	[REDACTED]	[REDACTED]	[REDACTED]
18	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]

\*Contact MPI for DNA Match Report data to link the names associated with the case bone samples.

Table 4:

List of cases/skeletal elements with DNA matches with skeletal elements which have to be located in order further re-associations are possible.

➤ **Recommendations**

Cases given in the table 4 should be investigated in order for skeletal elements are located and to be re-associated with existing skeletal elements stored in the Identification Centre Goražde. As there is possibility that these have been buried and identified the same recommendation as for cases from the category 3 should be followed.

After locating skeletal elements a systematic examination of cases and related documentation should take place with possible, further DNA sampling being employed. In this instance upon DNA testing, re-associations and identifications will be possible. Anthropologists should be engaged to undertake the examination work.

## 5. Cases with DNA matches with the cases stored at other mortuaries

The ICMP has found five cases with the DNA profile matches with the skeletal elements housed at the Visoko mortuary. All cases have DNA reports issued on the missing persons and respective Prosecutor Offices have to make a decision on further actions regarding these cases in order to authorize re-association, identification and burial of skeletal elements.

No	Case Label	DNA Samples located at IC Goražde	DNA samples located at Visoko mortuary
1	[REDACTED]	[REDACTED]	[REDACTED]
2	[REDACTED]	[REDACTED]	[REDACTED]
3	[REDACTED]	[REDACTED]	[REDACTED]
4	[REDACTED]	[REDACTED]	[REDACTED]
5	[REDACTED]	[REDACTED]	[REDACTED]

\*Contact MPI for DNA Match Report data to link the names associated with the case bone samples.

Table 5:

List of cases/skeletal elements with DNA matches with skeletal elements which are stored in Visoko mortuary

### ➤ Recommendations

Prosecutors in charge for these cases should agree on procedures so these skeletal elements can be re-associated. After all required activities are completed these cases can be identified and returned to families for burial.

## 6. Complex case with multiple inconsistencies

The ICMP has found one case at the Identification Centre Goražde with generated DNA reports and information that this person has been identified and buried. Review of the case documentation determined that a case with similar labeling and case number was issued to a family for burial. For this buried case it was determined that a DNA profile was obtained with no matches to the reference samples from the family who had received and buried the remains. Additionally, DNA results indicated mis-association of skeletal elements of the first person in question to another buried case.

<sup>3</sup> DNA sample taken from the skeletal element excavated at the „Perućac“ lake, however it is believed that the entire skeletal element was sent for DNA analysis.

Case at IC Goražde	DNA Samples located at IC Goražde	Additional DNA match with buried case	DNA samples
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]		
[REDACTED]	[REDACTED]	Inspection of the case file of [REDACTED] lead toward possibility that only mandible could be misplaced. Further investigation in order to reach final resolution for these cases is needed.	

\*Contact MPI for DNA Match Report data to link the names associated with the case bone samples.

Table 6:

Complex case of one single individual for whom family believe they identified and buried their missing relative.

➤ **Recommendations**

Local authorities and prosecutor in charge for these cases should investigate the case records and case background, and with use of DNA connections agree on procedures so these skeletal elements can be re-associated to the correct case, identified and returned to families for burial.

**7. Cases where human remains are not present**

There were 2 cases where no human skeletal elements are present and consisting only of personal belongings and clothing.

No	Case Label	Comment
1	[REDACTED]	Only clothing
2	[REDACTED]	Only clothing

Table 7:

List of cases without human skeletal elements.

➤ **Recommendations**

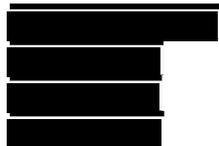
These cases can be closed based on instructions given from the POBIH and Cantonal POs. These should no longer be categorized as cases at the mortuary.

**8. Cases determined as ossuary material**

As a result of the identification process throughout the years there is an accumulation of fragmentary skeletal material which is assigned to the category of "ossuary material" due to the inability to associate the material to cases or individuals, or the inability or impracticability to extract DNA. The review found 9 complete cases that should now be designated as ossuary material.

No	Case Label	Comments
1	[REDACTED]	Prisutno: 1x PARCIJALAN STERNUM, 9x L REBRO, 4x D REBRO, 1x Th PRŠLJEN, 1x FRAGMENT SKAPULE, ~20x FRAGMENT REBRA. - ODJEĆA I PREDMETI: 2x DEBELI SMEĐI VUNENI PRSLUK, 1x PLAVI PLASTIČNI UPALJAČ. *NAPOMENE:

		<p>- SA OVOG SLUČAJA SU UZETA 4 DNA UZORKA, SVI POD ISTIM DNA KODOM VIS-499, OD KOJIH SU DVA PALA A DVA IMAJU GENERIRANE DNA PROFILE, JEDAN NA IME [REDAKCIJA], A DRUGI NA [REDAKCIJA]. SKELETNI ELEMENTI VEZANI ZA OVE DNA UZORKE NISU PRISUTNI, PA SE PRETPOSTAVLJA DA SU OVE DVIJE OSOBE IDENTIFIKOVANE I UKOPANE, A DA SU SKELETNI ELEMENTI KOJI SU TRENUTNO PRISUTNI NA SLUČAJU IZDOJENI KAO KOSTURNICA.</p> <p>- JEDNO DESNO REBRO KOJE JE PRISUTNO NA SLUČAJU JE REZANO ZA DNA UZORAK, ALI NIJE POZNATO DA LI JE TO REBRO I TESTIRANO. UKOLIKO JESTE, ONDA JE DOŠLO DO GREŠKE PRILIKOM IZDVAJANJA SKELETNIH ELEMENATA KOJI SU UKOPANI.*</p>
2	[REDAKCIJA]	<p>Prisutno:</p> <p>-VREĆICA I - [REDAKCIJA] [REDAKCIJA] (MK/KOSTURNICA: 3x IZGORIJELI FRAGMENTI PRŠLJENOVA, 6x SITNI FRAGMENTI REBARA, PROKSIMALNI FRAGMENT N FEMURA, FRAGMENT DIJAFIZE N FEMURA, DISTALNI FRAGMENT D FIBULE, 29x SITNI FRAGMENTI DUGIH KOSTIJU, FRAGMENT SKAPULE I DOSTA SITNIH FRAGMENTATA IZGORIJELIH KOSTIJU).</p> <p>-VREĆICA II - [REDAKCIJA] [REDAKCIJA] (MK/KOSTURNICA: 23x SITNI FRAGMENTI LOBANJE I DOSTA SITNIH FRAGMENTATA KOSTIJU).</p> <p>- VREĆICA III - [REDAKCIJA] [REDAKCIJA] (MK/KOSTURNICA: 5x SITNI FRAGMENTI KOSTIJU LOBANJE, PROKSIMALNI DIO L RADIUSA, PROKSIMALNI DIO L ULNE, 16x FRAGMENTI DUGIH KOSTIJU I DOSTA SITNIH FRAGMENTATA IZGORIJELIH KOSTIJU).</p> <p>ODJEĆA I LIČNI PREDMETI: METALNO DUGME, METALNA KOPČA OD KAIŠA.</p> <p>- VREĆICA IV - [REDAKCIJA] [REDAKCIJA] [REDAKCIJA] (3x FRAGMENTI LOBANJE I DOSTA SITNIH FRAGMENTATA KOSTIJU).</p> <p>-VREĆICA V - [REDAKCIJA] [REDAKCIJA] (U DATOJ VREĆICI NISU PRONAĐENI SKELETNI ELEMENTI TJ. VREĆICA JE BILA PRAZNA).</p> <p>-VREĆICA VI - BEZ OZNAKE (MK/KOSTURNICA: DOSTA SITNIH FRAGMENTATA KOSTIJU KOJE SU POMIJEŠANE SA ZEMLJOM).</p>
3	[REDAKCIJA]	<p>Prisutno:</p> <p>- SVI UZORCI NEUSPJEŠNI TE SE NEMA VIŠE ŠTA TESTIRATI. SLUČAJ SE MOŽE ZATVORITI ISTRAŽNIM RADNJAMA. SLUČAJ SE KATEGORIŠE KAO KOSTURNICA.</p> <p>30.05.2014.-DS</p> <p>- U SLUČAJU PRONAĐENE 3 ODVOJENE VREĆICE SA OZNAKAMA 1A, 2A, I 3A. SVE TRI VREĆICE SADRŽE JAKO FRAGMENTIRANE I NAGORJELE SKELETNE ELEMENTE. INVENTAR PREPOZNTLJIVIH SKELETNIH ELEMENATA SE NALAZI NA FORMI "MIJEŠANE KOSTI" U SKLOPU DOKUMENTACIJE SLUČAJA.</p>

		<p>*NAPOMENA: PREMA INFORMACIJAMA IZ INO-a, SKELETNI ELEMENTI IZ OVOG SLUČAJA SU UKOPANI U ZAJEDNIČKU GROBNICU. BUDUĆI DA SU SKELETNI ELEMENTI I DALJE PRISUTNI NA SLUČAJU, MOGUĆE JE DA JE DOŠLO DO GREŠKE PRI IZDAVANJU SKELETNIH ELEMENATA, ŠTO BI TREBALO BITI DETALJNIJE ISTRAŽENO.*</p>
4		<p>Prisutno:  - TESTIRANI SKELETNI ELEMENTI KOJI SU PRUZILI USPJESAN DNA PROFIL REASOCIRANI SU NA DRUGE SLUCAJEVE DOK ZA NEUSPJESNE UZORKE SE NEMA VISE STA UZETI ZA TESTIRANJE.  MK/KOSTURNICA: 3X VRATNI PRŠLJENOVNI, 3X TORAKALNI PRŠLJENOVNI, 1X LUMBALNI PRŠLJEN, MANUBRIUM, 8X FRAGMENTI LOBANJE, 2X L MC, 2X D REBRA, 4X L REBRA, MANJI BROJ ULOMAKA OSTALIH KOSTIJU, 14X FALANGE STOPALA-UKLOPLJENO     PO PRISPJEĆU DNA NALAZA ODLUČITI O PRIPADNOSTI SKELETNIH ELEMENATA IZ KOSTURNICE.  ODJEĆA I PREDMETI: 2 PARA ČARAPA, GUMENE KRATKE ČIZME DUŽINE ĐONA 26CM, RUKAV BORDO PLETENOG DŽEMPERA, OSTACI KARIRANE KOŠULJE, OSTACI BRAON TANKIH ŠTOFNIH HLAČA, OSTACI PLAVE TKANINE SA CRNIM UZORKOM.</p>
5		<p>Prisutno: FRAGMENT FIBULE, SLOBODAN ZUB, 4x HP, VIŠE FRAGMENTA KOSTIJU.  *NAPOMENA: SVI UZORCI UZETI SA OVOG SLUČAJA KAO I SVI SKELETNI ELEMENTI KOJI PRIPADAJU TIM UZORCIMA VIŠE SE NE NALAZE NA SLUČAJU.*  - ODJEĆA: BORDO DEKICA, TRI VELIKA KOMADA TKANINE ZELENE BOJE SA CVJETIĆIMA, KOMAD TKANINE CRNE BOJE SA SVIJETLIM CVJETIĆIMA, SVIJETLA ČARAPA, SIVA DOKOLJENICA, CRVENA PRIGLAVKA, SVIJETLI POLOVER NA KOPČANJE.</p>
6		<p>Prisutno:  - SLUČAJ PREDSTAVLJA MALA VREĆICA IZGORENIH KOSTIJU GDJE SE PREPOZNAJU SLJEDEĆI SKELETNI ELEMENTI: PAR FRAGMENTA LOBANJE IZ OKCIPITALNO-TEMPORALNE REGIJE, 4X FRAGMENTI PRŠLJENOVA, 1X FRAGMENT GLAVE HUMERUSA, 2X FRAGMENTI MANDIBULARNOG KONDILA, PAR FRAGMENTA DUGIH KOSTIJU I NEŠTO FRAGMENTA DRUGIH KOJI SE ANATOMSKI NE MOGU ODREDITI.  *NAPOMENE: DNA UZORAK NIJE UZIMAN NITI ĆE BITI UZIMAN! POKUŠATI DOĆI DO INFORMACIJE DA LI JE PROVEDENA ZVANIČNA IDENTIFIKACIJA SLUČAJA I NA OSNOVU ČEGA.*</p>
7		<p>Prisutno:  - SLUČAJ PREDSTAVLJA MALA VREĆICA IZGORENIH KOSTIJU GDJE SE PREPOZNAJU SLJEDEĆI SKELETNI ELEMENTI: PAR FRAGMENTA LOBANJE IZ OKCIPITALNO-TEMPORALNE REGIJE, 5X FRAGMENTI PRŠLJENOVA, PAR FRAGMENTA DUGIH KOSTIJU I SITNIJI FRAGMENTI DRUGIH KOSTIJU KOJE SE ANATOMSKI NE MOGU ODREDITI.  *NAPOMENE: DNA UZORAK NIJE UZIMAN NITI ĆE BITI UZIMAN! POKUŠATI DOĆI DO INFORMACIJE DA LI JE PROVEDENA ZVANIČNA IDENTIFIKACIJA SLUČAJA I NA OSNOVU ČEGA.*</p>

8	[REDACTED]	Prisutno: - SVI UZORCI PALI, NEMA SE ŠTA UZETI SA SLUČAJA ZA TESTIRANJE TE SE SLUČAJ KATEGORIZIRA KAO KOSTURNICA. - U SLUČAJU PRISUTAN SAMO MANJI BROJ NAGORJELIH SKELETNIH OSTATAKA LJUDSKOG PORIJEKLA. ŽIVOTINJSKE KOSTI KOJE SU TAKOĐE BILE PRISUTNE NA SLUČAJU SU ODSTRANJENE. - IZ SLUČAJA SU UZETA TRI DNA UZORKA KOJI SU I DALJE U PROGRESU.
9	[REDACTED]	Prisutno: 2x FRAGMENTI STERNUMA, D KLAVIKULA, L KLAVIKULA, D SKAPULA, L SKAPULA, D REBRA 1-9, L REBRA 1-5, T1-T4, T6, T8-T9).

*Table 8:*

*List of cases determined to be ossuary material (no more suitable skeletal elements for DNA testing)*

➤ **Recommendations**

Resolution or long term storage/interment of cases should be based on instructions given from the POBIH and Cantonal POs, after appropriate engagement with other stakeholders.

Further examinations should be performed after re-exhumations of those cases originating from the same exhumation sites to determine if any case material can be taken out of the ossuary material category.