



ICRC

Challenges and Opportunities for Managing Forensic Data related to Dead Migrants

Observations from the ICRC

Maria Mikellide
Forensic Coordinator Sri Lanka



ICRC



Latin America and Enforced Disappearances (1980's)



ICRC



The Balkans – ICTY

The ICRC and Forensics



<http://www.icrc.org>

- 2003 December – 28th International Conference of the Red Cross and Red Crescent



ICRC

Guiding Principle



*Families of The Missing: at
the core of investigations
into their whereabouts*



ICRC

Participation of families of The Missing

- Contribution to investigation
- Collection of AMD
- Legitimacy of investigations
- Acceptance of results (mourning & healing)

Data Collection

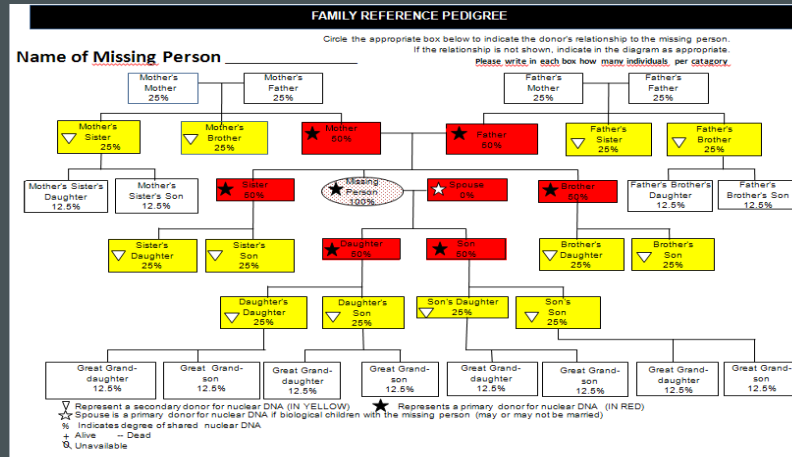
- List of Missing
- Ante-mortem data
- Circumstances of disappearance and possible burial sites



A large, open notebook or ledger with many columns and rows of handwritten text, likely a data collection form. The text is dense and appears to be organized into a structured format, possibly a list of names and details.



Biological Reference Sample Collection



- Collection of Pedigree Trees
- Selection of donors
- Entry of donor information in an electronic data management system (including name relationship to MP, address and phone number)
- Filtering by place of residence donors are contacted for appointments
- Data on appointments is entered in a database



ICRC

RECOVERY LOG

SITE CODE: _____

SITE NAME: _____

# ¹	Suffix ²	Description	Photo	Survey	Coordinate ³	Recovered by	Date	Recovery form	Notes
			<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
			<input type="checkbox"/>						
			<input type="checkbox"/>						

Recorded by: _____ Date: _____

Field Case Record

Site Code:¹ _____

Description of the:

Sex estimation:² (T)

Male

Female

Indeterminate

Position of the body

Dorsal

Ventral

Left side

Right side

Disoriented

Partially buried

Partial

Other

Orientation of the h

Present

Yes/No

Condition of the re

Skull

Mandible

Teeth

Hyoid

Clavicle

Scapula

Humerus

Ulna

Radius

Carpals

Metacarpals

Phalanges

Cervical

Thoracic

Lumbar

Coxa

Sacrum

Femur

Patella

Tibia

Fibula

Other

Age estimation:³ (T)

Adult

Sub adult

Pre adult

Indeterminate

Preservation:

Good

Fair

Poor

¹ Correlative number: 001, 002...
² Indicate B (body), BP (body part), GBP (individual bones),
³ Only for remains and artefacts other than field case record

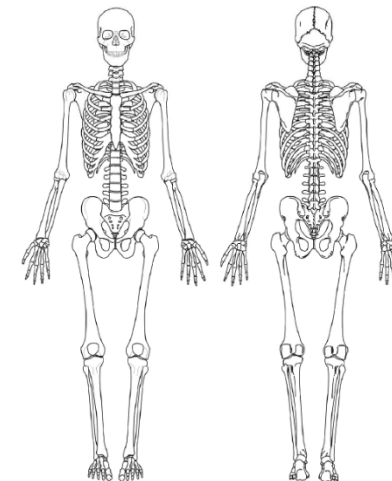
Version 1.1, November 2011

Version 1.1, November 2011

Version 1.1, November 2011

Version 1.1, November 2011

Version 1.1, November 2011



Version 1.1, November 2011

69



ICRC

Laboratory Analysis



Case number_Box of bones from morgue-0018 _____ Date/Time 22.05.11 _____
 Agency_ICRC _____ Recorder_MBAE _____

ANTHROPOLOGICAL ANALYSIS FORM – ADULTS

AGE _____ SEX _____
 STATURE _____

CRANIAL MORPHOLOGICAL ANALYSIS FOR SEX DETERMINATION

Nuchal Crest	Mastoid Process	Supraorbital Margin	Glabella	Mental Eminence	SEX DETERMINATION

PELVIC MORPHOLOGICAL ANALYSIS FOR SEX DETERMINATION

	Subpubic Concavity	Medial Ridge	Sciatic Notch	Ventral Arc	Preauricular Sulcus	SEX DETERMINATION
Right						
Left						

AGE: Lamendin

Tooth	HR	HPAR	HTRAN	AGE

HUMERAL AND FEMORAL HEAD DIAMETERS FOR SEX DETERMINATION

Element	Head Dia.	M or F?

Humerus F <43-47> M
Femur F <41.5-45.5> M

Lamendin Mean Age _____ +/- _____

AGE: Pubic Symphysis (Suchey-Brooks)

SIDE	Phase	AGE RANGE	Mean

AGE: Sternal Rib End (Iscan&Loth)

SIDE & Nr.	Phase	AGE RANGE

AGE: Epiphyseal Union

ELEMENT	Degree of Union	AGE ESTIMATION

AGE: Dental Calcification

Tooth	Phase	AGE ESTIMATION

STATURE DETERMINATION / LONG BONE MEASUREMENTS

ELEMENT	Maximum Length	Alternate Length	Head Diameter	STATURE ESTIMATION

N.O. = Not Observed N.R. = Not Recovered

NOTES.....

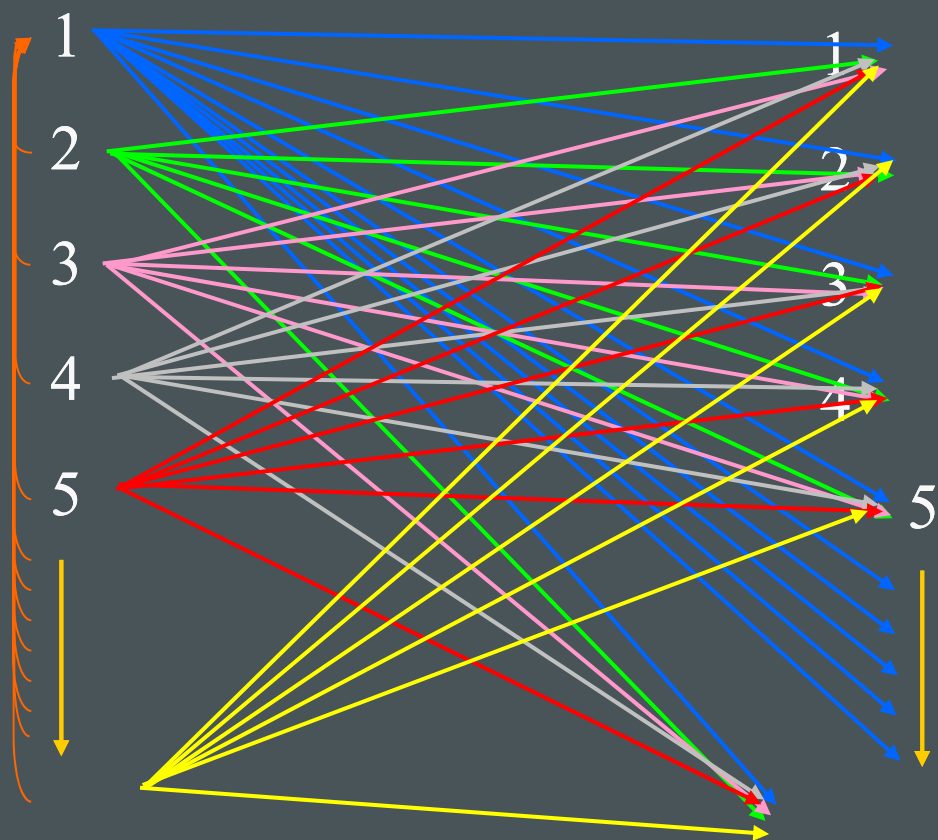
Anthropological Analysis, Adults, Laboratory – page 1 of 2



DNA Matching

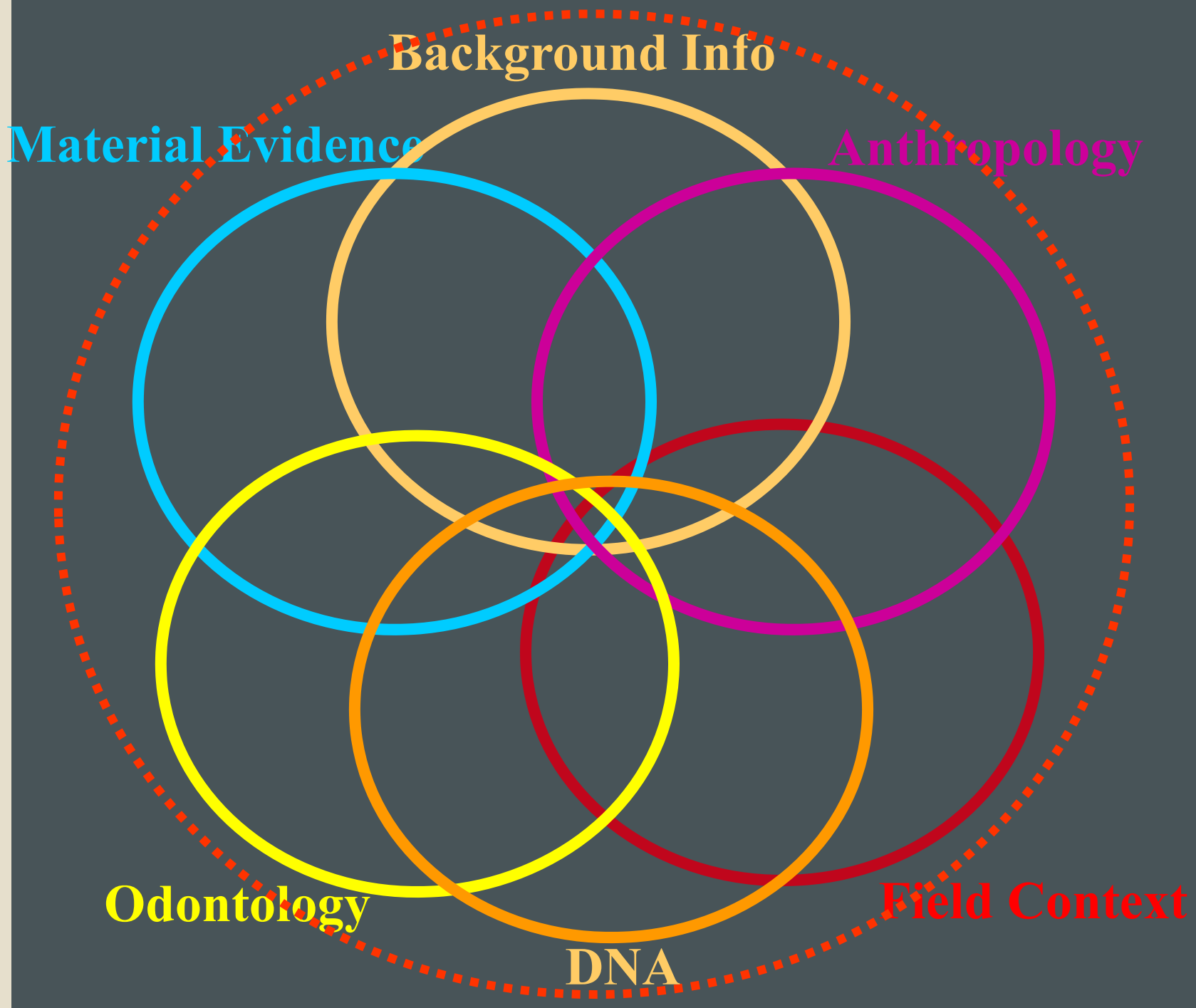


Families of Missing





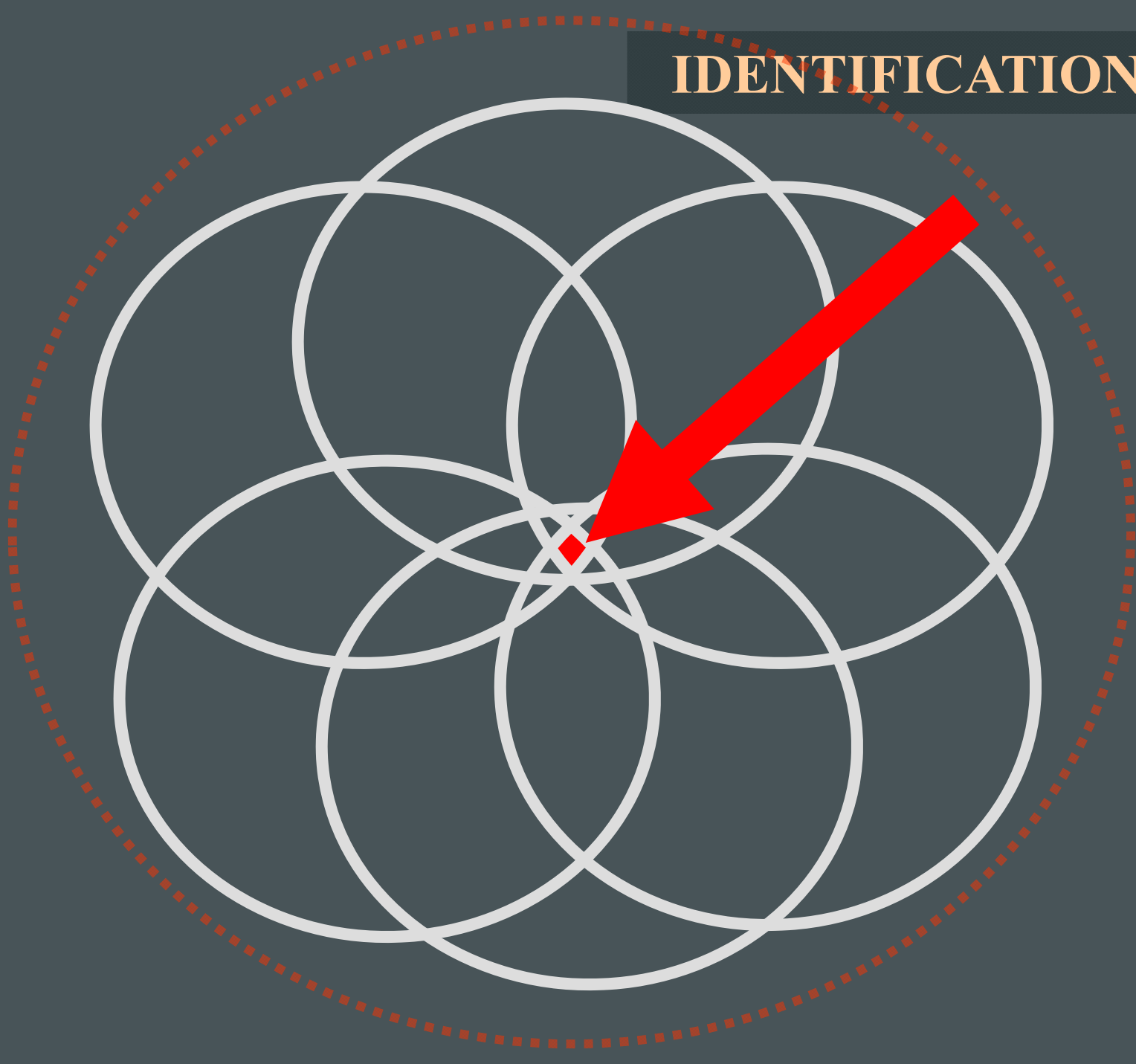
ICRC





ICRC

IDENTIFICATION





ICRC

Disasters and Catastrophes



Dead Body Information

Management of Dead Bodies after Disasters: A Field Manual for First Responders

ANNEX 1 DEAD BODY INFORMATION FORM

Unique code:
(Use this same code on associated files, photographs or stored objects.)

Possible identity of body (Explain reasons for attributing a possible identity):

Person completing this form

Name: _____

Official status: _____ Place & date: _____

Signature: _____

Recovery details (Include place, date, time, by whom found, and circumstance coordinates if available. Indicate if other bodies were recovered in the same area possible relationship, if identified)

40

Unique Code: _____

ANNEX 1

A. PHYSICAL DESCRIPTION

A.1	General condition (mark one):	a)	Complete body	Incomplete body (describe):		Body part (describe):	
		b)	Well preserved	Decomposed	Partially skeletonized	Fully skeletonized	Burnt
A.2	Apparent sex (mark one and describe evidence):	Male			Female		Undetermined
		Describe evidence (genitals, beard, etc):					
A.3	Age group (mark one):	Infant	Child	Adolescent	Adult	Elderly	
A.4	Physical description (measure or mark one):	Height (crown to heel with units):			Short	Average	Tall
		Weight (specify units):		Slim	Average	Fat	
A.5	a) Head hair:	Colour:	Length:	Shape:	Baldness:		



41



ICRC

Crisis Management Center

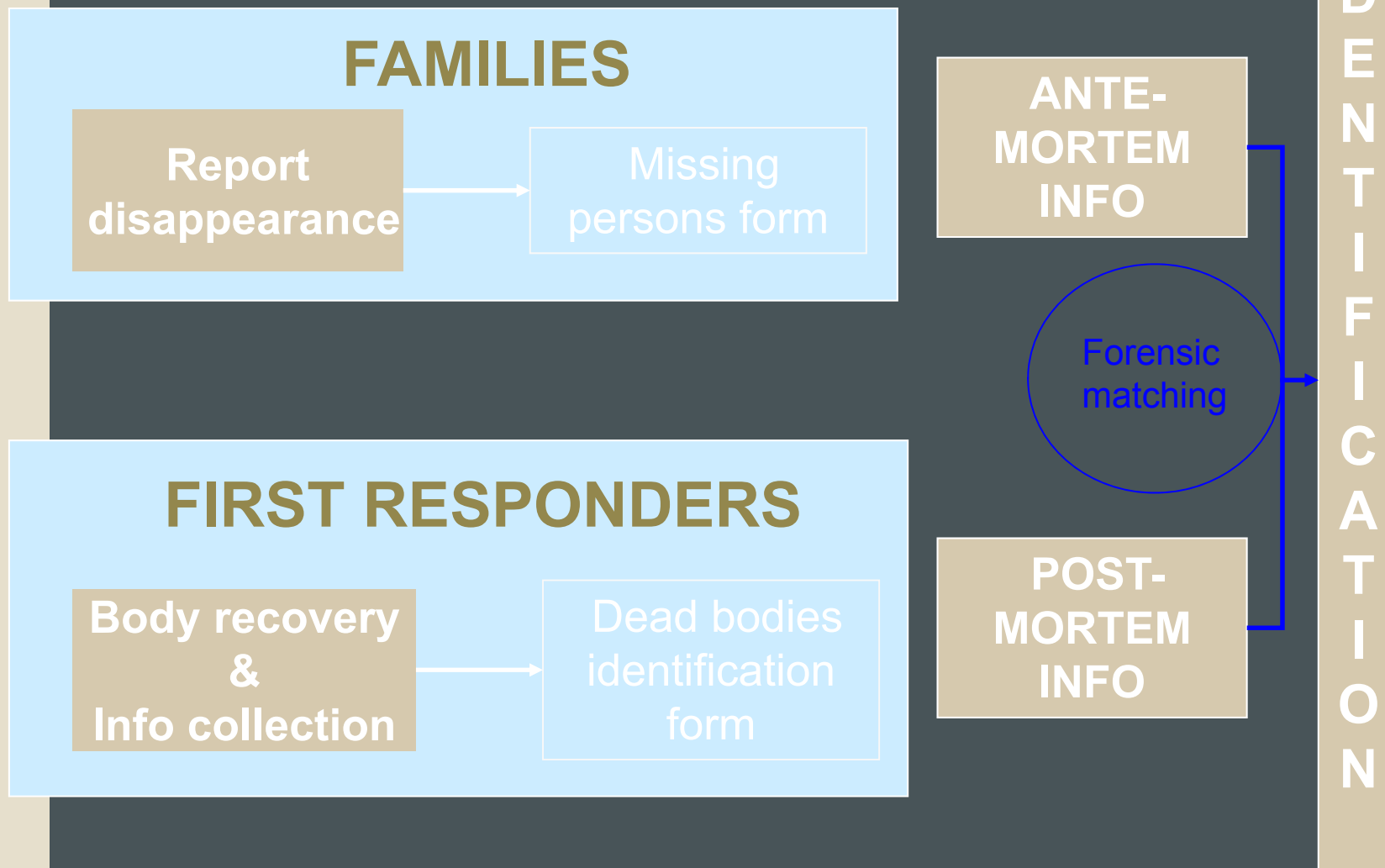
- Receive Tracing Requests
- Compile a Missing Persons List
- Collection of AMD
- Consent form
- Centralization of information





ICRC

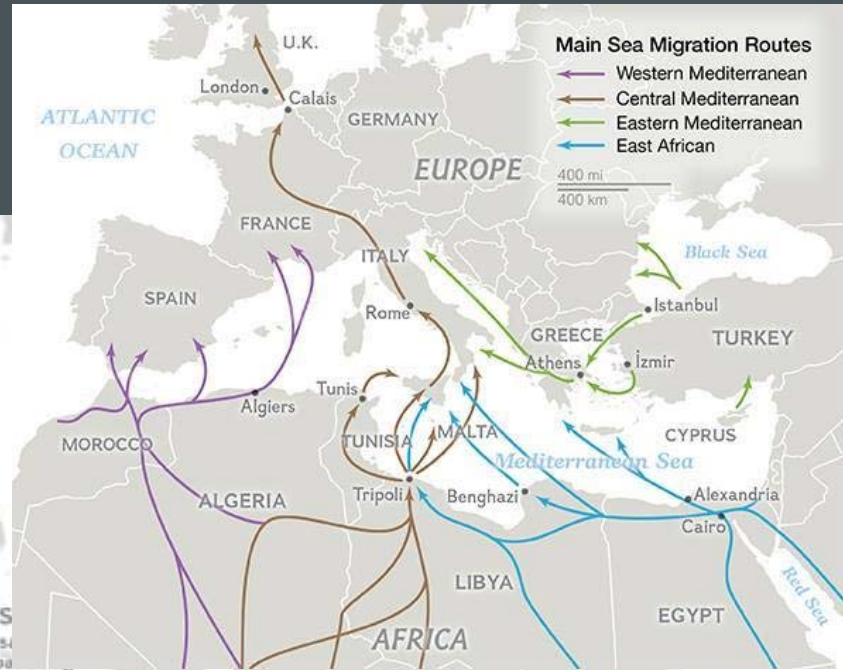
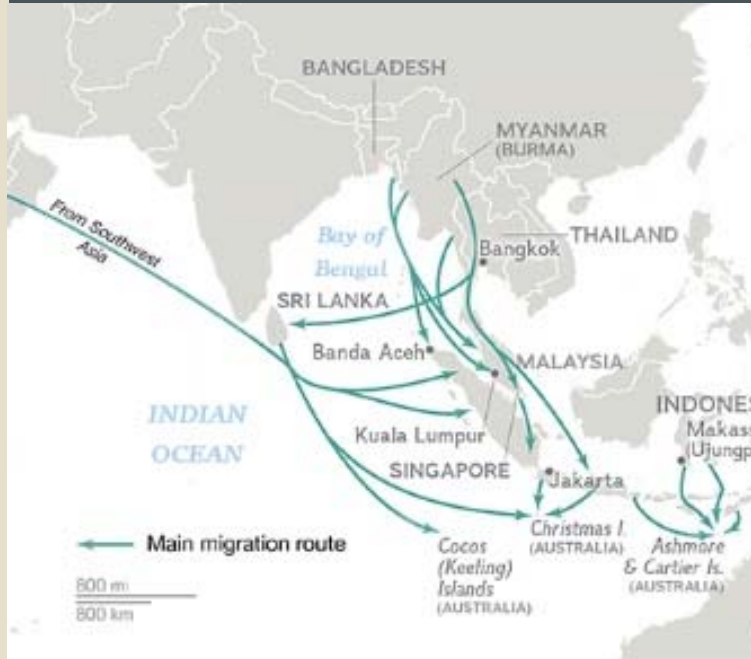
Forensic Human Identification





ICRC

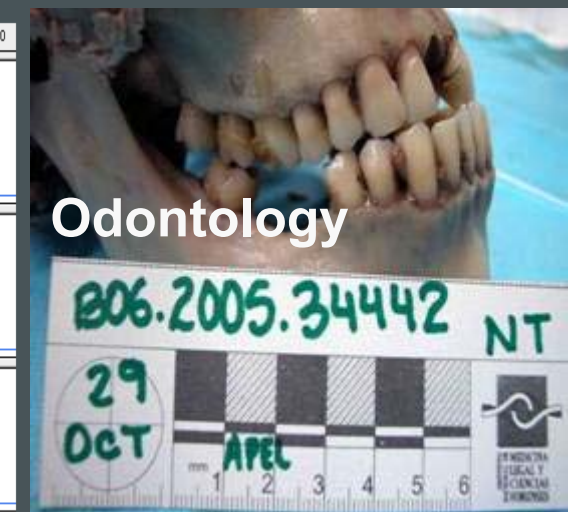
Migration





ICRC

Forensic identification: multidisciplinary task





ICRC

Methods of FHI

- **Visual** recognition (fresh cadavers)
- +
- 2° • **Circumstantial** evidence
(including time/site of occurrence, clothing, etc.)
- +
- **Strong AMD-PMD match of biological profile** (sex, age, stature, ancestry)
- +
- 1° friction-ridge analysis; dentistry; unique medical/anthr. conditions; X-rays; DNA



ICRC

Challenges

- Who is Missing?
- Where are the families?
- Lack of Political Will / Lack of Resources
- Fragmented Systems
- Capacities Overwhelmed
- Lack of consistency
- Multiple languages
- Different cultures



ICRC

Post-Mortem Data

Shift of responsibility

Different Systems

Varying practices:

- Autopsy
- External examination
- Finger printing
- Genetic Sampling
- Dental Records
- Ancillary Examinations

No centralized repository of information





ICRC

Ante-Mortem Data and BRS

- Families under-report missing persons
- Where to report a missing person?
- Difficulty in access to the families
- Lack of medical/dental data
- Limited number of qualified persons to collect accurate and quality assured data
- No standardization
- Language barriers
- Cultural considerations

No centralized repository of information



ICRC

Challenges

- Lack of coordination (mechanisms: local, national-regional-international)
- Lack of Trust
- Lack of resources
- Ownership of information





ICRC

Opportunities



ICRC

Crowd-Sourcing of Information

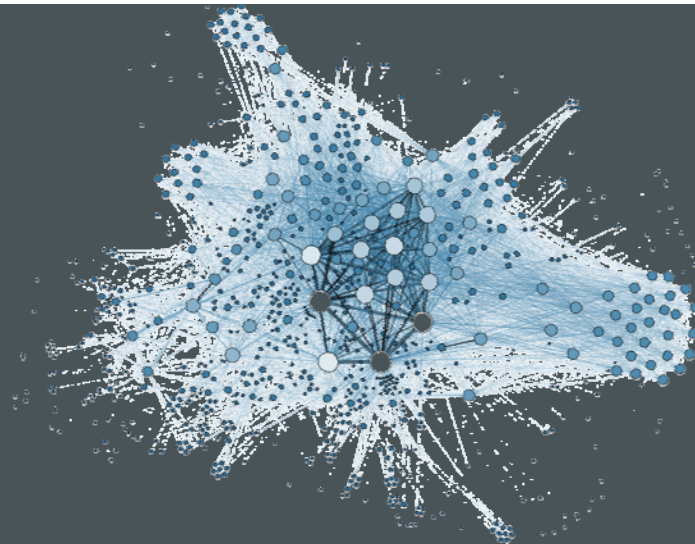
The screenshot displays the NamUs (National Missing and Unidentified Persons System) web interface. At the top, the header includes the system name and navigation links like Home, My Dashboard, New Case, Search, Resources, Help, FAQ, About, and NamUs Home. A search bar is present on the right.

The main content area is divided into several sections:

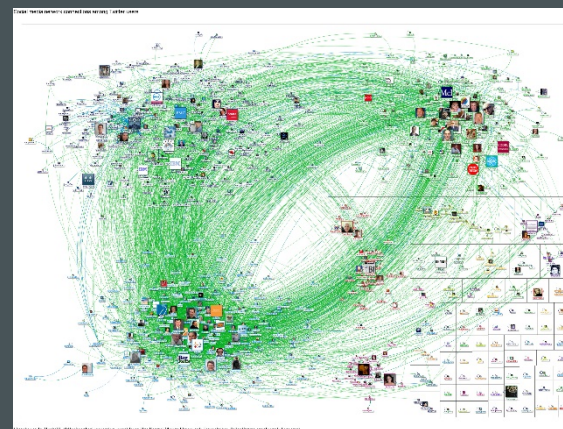
- HOME**: A navigation bar with a 'SEARCH' button.
- SEARCH**: A search filter panel with fields for Identity unknown, Lastname, Forenames, Nationality, Current age (with a slider from 0 to 100), Sex, Colour of eyes, and Colour of hair. A 'SEARCH' button is at the bottom.
- Search result : 1147**: A grid of search results, each featuring a thumbnail image and a brief description:
 - ABARCA LOPEZ JARETH ALFREDO: Age today : 8 years old, Nationality : Honduras
 - ABASE AMIRA: Age today : 17 years old, Nationality : Germany
 - ABDELSAQI AMIRA KAMAL: Age today : 3 years old, Nationality : Bulgaria
 - ABDELSAQI ALIA KAMAL: Age today : 3 years old, Nationality : Bulgaria
 - FAUZI: Age today : 44 years old, Nationality : Ireland, Somalia
- Case Information**: A detailed form for a specific case, including:
 - Case Information**: Status (Missing), Age (30 to 30 years old), Age Now (Unknown), Race (White), Ethnicity (Hispanic/Latino), Sex (Female), Height (65 to 67 inches), Weight (120 to 135 pounds).
 - Circumstances**: Type of Address (Other), Address Description (Eastbound I-4, just west of Daytona), City (Daytona), State (Florida), Zip Code, County (Alachua). Circumstances text: "Jane disappeared while on a trip to Jacksonville, her car was discovered on I-4 Eastbound, just west of I-95. She was last seen walking away from an abandoned car along eastbound I-4." A checkbox for "Circumstances are viewable by the public" is checked.
- Case Navigation**: A sidebar menu with categories like Circumstances, Physical Characteristics, Clothing and Accessories, Transportation Methods, Dental, DNA Sample, Photos, Documents, Police Information, Reports, and Contacts.

At the bottom of the interface, there is a pagination control showing "1 2 3 4 5 6 7 ...128 >".

Data Mining



- Capability to import data from different formats
- Automatic Extraction of information from other humanitarian agencies and open sources including social media
- Automated sorting, standardization and population of fields
- Automatic alerts on the availability of information





New technologies and Alternative Sources

- Mapping Software (GIS Predictive Modelling)
- Facial Recognition Matching Software
- Personal Effects Matching Software
- Automatic Translation

- Social Media Images
 - ▶ Tattoos
 - ▶ Dental
 - ▶ Personal effects (e.g. jewellery)



ICRC

Considerations



ICRC

Validation



Validation



Contact with Families



Detailed Interview
Automatic Data Entry





ICRC

Data Protection Principles

- "Personal data" means any information relating to an identified or identifiable individual, including documents collected or copied in view of contributing to the process of identification.
- "Sensitive data" means data likely to give rise to unlawful or arbitrary discrimination based on racial or ethnic origin, nationality, religious or other beliefs, sexual behavior, criminal background, medical data or health information.
- Personal and sensitive data shall be collected and processed fairly and lawfully, with appropriate safeguards.



ICRC

Data Protection Principles

- The collection and use of personal data should, where possible, be based on the informed consent of the person concerned.
- Personal and sensitive data may not be processed, used, disclosed, or transferred for purposes other than those for which they were collected without the consent of the person concerned, except if required by a substantial public interest or for the protection of the vital interests of the person concerned or of others.
- Access to personal and sensitive data should be granted to the individual to whom the data relate.
 - ▶ Including the right to challenge the accuracy and completeness of the data and to have them amended as appropriate



ICRC

Data relating to Missing Persons

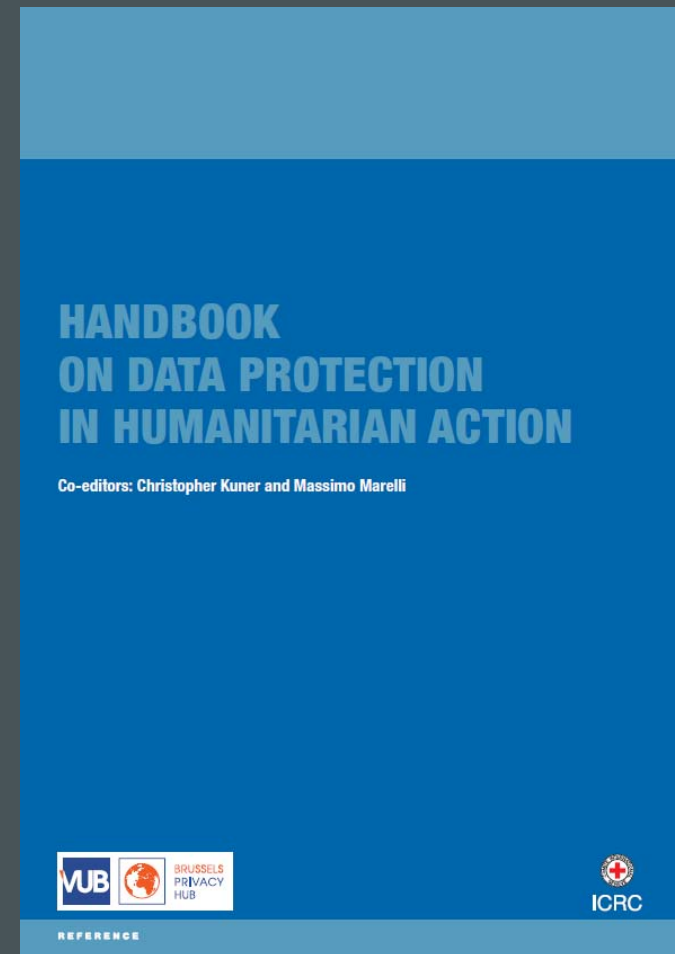
When the fate and whereabouts of missing persons are being clarified, personal data can be processed on the basis of the vital interest of the person concerned or of another person, as well as for important grounds of public interest.



ICRC

Informed consent & Data transfer

- Data transfer is possible if agreed by the concerned person
- Exception: individual cannot be reached and collection of data is clearly in his interest.
 - ▶ *In this case, data transfer must be carefully considered*





ICRC

Recommendations

- Legal/Administrative Framework
- Coordination/cooperation multiple stakeholders (national, regional supraregional mechanisms):
- Training and dedicated capacities
- Standardization of terminology, forms and protocols
- Centralization of information
- Validation and Quality Control
- Searchable Database with Different Access Levels
- Family outreach programs, to give and receive information (AMD/DNA) + psychosocial support



ICRC

Thank you