

Responsible data management training cycle

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Session 4

Responsible Data in action - part 2

Introduction to session 4

And now...



1/ The different dimensions of responsible data management



2/ Focus on data protection



3/ The concepts of responsible data management in action- part 1



4/ The concepts of responsible data management in action- part 2



5/ Discover how current stakes apply to you

Session 4 agenda

- Introduction to today's session
- Overview of the « data usage » steps of the cycle
- 1 focus on topic of high interest : De-identification
- Group work on 6 themes & debrief
- Local peer-to-peer exchange
- Conclusion

The development of this training material is supported by the French Ministry of Europe and Foreign Affairs (MEAE-CDCS). Nevertheless, the ideas and opinions presented in this training do not necessarily represent those of MEAE-CDCS.

Feedback on the homework

Feedback on homework



Questions & Answers and Quiz



Quiz



Questions & Answers

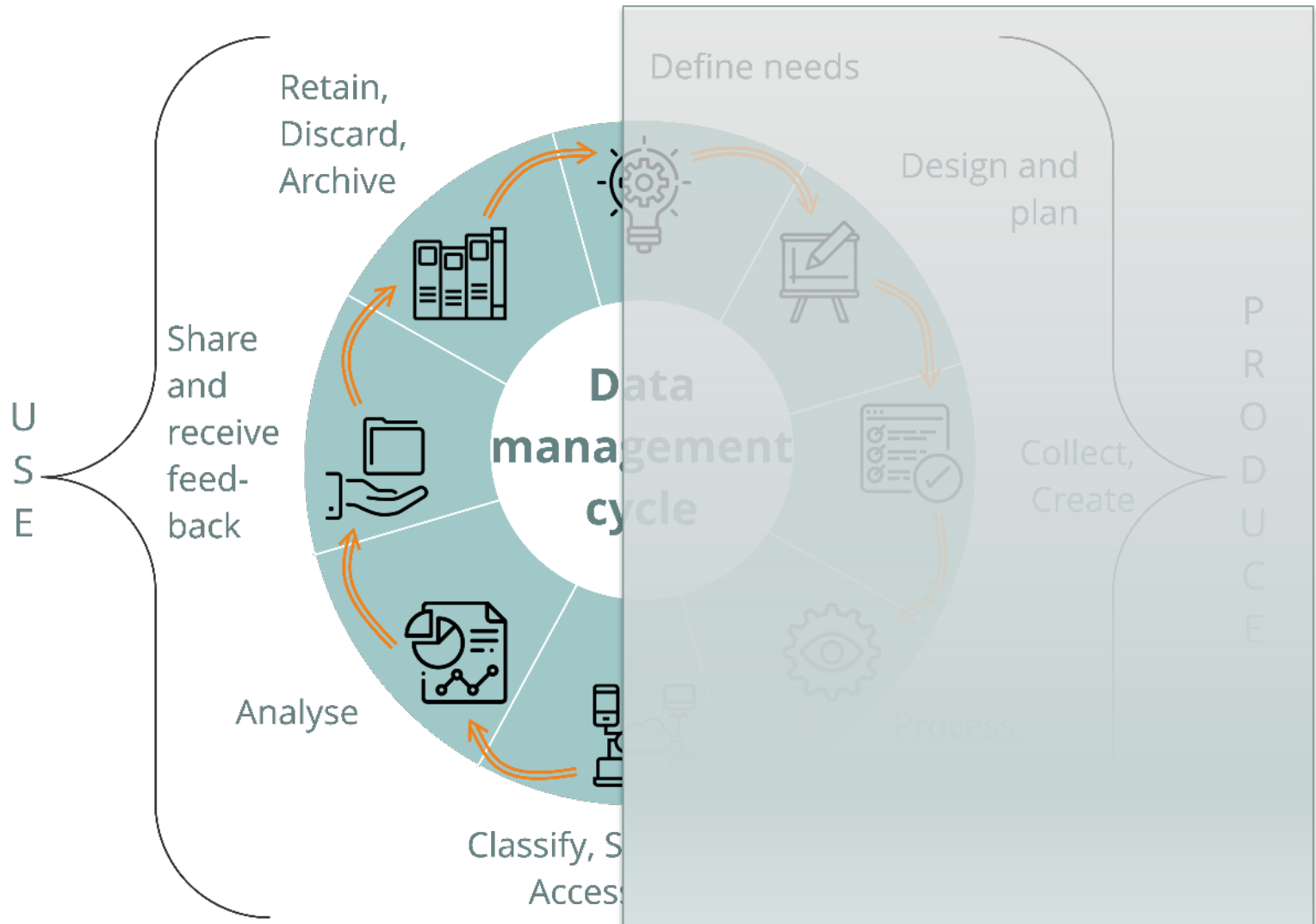
You can find all the questions and answers from last session, including those we didn't have time to answer live, in the constant companion.

Do you have new questions on the last session?



Responsible data applied to data usage

Data Management cycle



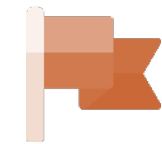
Do you remember Akachaland and our Unicorn NGO?



Remember...

In the country **Akachaland**, a major flood during the moon season has devastated around 30 villages, located in the north. You are a member of the « **Unicorn** » **NGO**, from Finobaka, specialized in the protection of children and women to whom you also provide food and NFI.

Unicorn is working **with a its local partner Akachaland care who is amongst other things collecting the data**. The 2 ONGs have decided to share the database to avoid collecting too much data.



Akachaland



Step 6:

Analyse



Confidentiality

- Ensure data for analysis is only **accessible to authorized staff**

Security

- **Respect SOPs** on analysis

Quality

- Follow the analysis plan / check what is produced is inline with what was planned
- **Ensure the analysis is not unduly biased**

Literacy

- Ensure **proper understanding of data quality**, bias, of the teams involved in the cleaning, as well as the limits of the data collected



What would it look like in Akachaland?



Unicorn put in place **internal procedures** alongside all the steps of the data management cycle to harmonise the practises in its missions and provide guidance to its staff, and has worked with Akachaland Care to do the same.

Akachaland Care colleagues collected data amongst the women and children. **This collection aims at identifying the recipients** of Unicorn's assistance **and their specific needs**. The data is sensitive and personal and is stored in a database. 2 members of your Unicorn team need access to the database to analyse it.

How do you check that the collected data matches its designed purpose?
 How do manage the access rights to the database?
 What measures do you take to follow your own procedures? How do you make sure the analysis process is unbiased ?

ANALYSIS PLAN

Research question	Indicator variable	Characteristic question	Data collection unit	Desired disaggregation	Analysis type
What are the characteristics of the population in terms of age, gender and dependency rate?	Household composition	1. What is the size of the head of household? 2. What is the age of the head of household? 3. Is the household headed by a woman? 4. What is the total number of household members? 5. What is the age of the household member? 6. What is the age of the household member (year)?	Household	Region domain	Population pyramid, Frequency distribution in percent, Stacked bar chart of sex and age, Stacked bar chart of age
What are the most common reasons for household basic needs lack of access, affordability and/or household size multiple consumption patterns?	Dependency rate	What is the age of the household member (year)?	Household	Region	Grouped bar chart to breakdown between population above and below 12 years old, Percentage of Dependency indicator application to year and the other population aged 12 or of the total population total population resulting grouping age population between 13 and 19 years.
What are the most common reasons for household basic needs lack of access, affordability and/or household size multiple consumption patterns?	Affordability of basic household needs	What is your household's basic needs can you not afford?	Household	Region	Frequency distribution.
What are the most common reasons for household basic needs lack of access, affordability and/or household size multiple consumption patterns?	Access to services	1. What is the principal source of drinking water for members of your household? 2. Where do you and your household members purchase their main food items? 3. How do you and your household members purchase their main food items?	Household	Region	Grouped bar chart per region, Frequency distribution of types of household water sources, Includes the response options: public, unimproved, hand-dug/protected, borehole, protected spring, protected spring, and protected well, Frequency distribution of types of household water sources, Includes the response options: household level and community level.



Step 7 :



Confidentiality

- Ensure data is only **shared to authorized staff and partners**
- De-identify what you can, through aggregation and anonymization (or pseudonymization if no other solution)
- Minimise the personal data shared



Security

Ensure **security** of platform sharing data, with passwords/encryption avoid use of email if they – or your recipient's- are not encrypted
Respect SOPs on data sharing
Avoid non-professional accounts/emails/hardware used
Ensure passwords are shared in a secure fashion

Literacy

Quality

- Share analysis with communities if relevant for feedback
- Build spaces for feedback with partners/communities
- **Share aggregated data/ analysis with wider community if relevant / not sensitive**

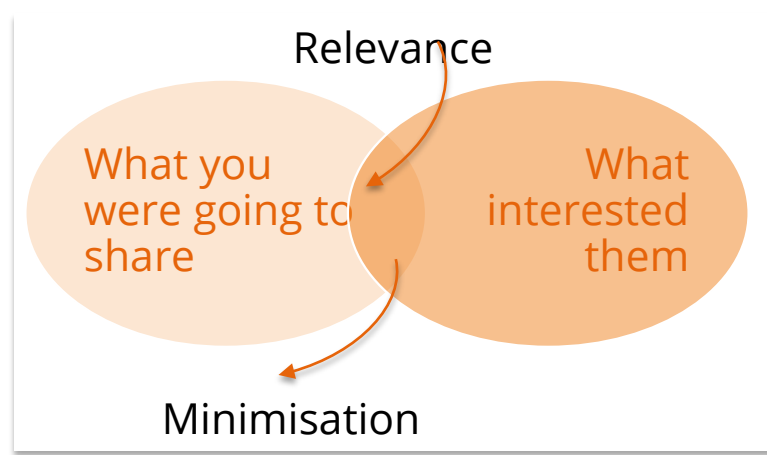
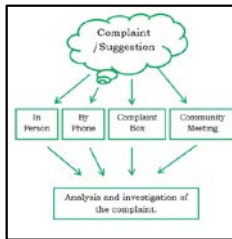
What would it look like in Akachaland?

The **data analysis is completed**. Your donor from Brajoki is requesting the database as planned for an audit. **Some affected communities are concerned about the data being shared too widely**, as the armed group AKaidnippers is active and specialized in stealing the localisation data of children.



How do you prepare the data sharing to make sure it's secure? Which platform are you going to use to share data? How do you make sure the shared data will be used properly with confidentiality by the donor?

Which mechanism was planned to insure the communities can share feedback? How will you respond to their worries about being identified?



Ressources / templates available



Sources: Enisa (EU) & OHCHR

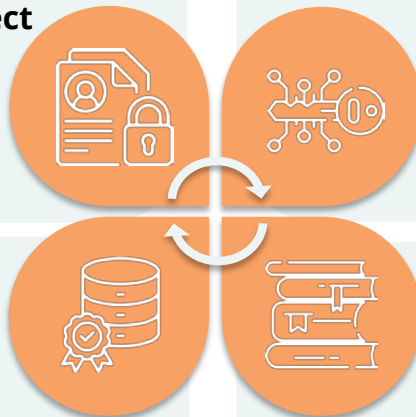
Step 8 :

Retain,
Discard,
Archive



Confidentiality

- Follow your RAD plan: make sure you anonymise / archive (/ intermediary archive) or delete as soon as it can be
- **Check there are no duplicates elsewhere**
- Continue applying **data subject rights**
- Check that your partners also respect the RAD plan!



Security

- Ensure **physical & IT security** of data (paper & digital)
- **Respect SOPs** on access

Literacy

- Accompany partners on the importance of becoming RAD
- Share learnings from this project

Quality

- Document any issues encountered for accountability

What would it look like in Akachaland?

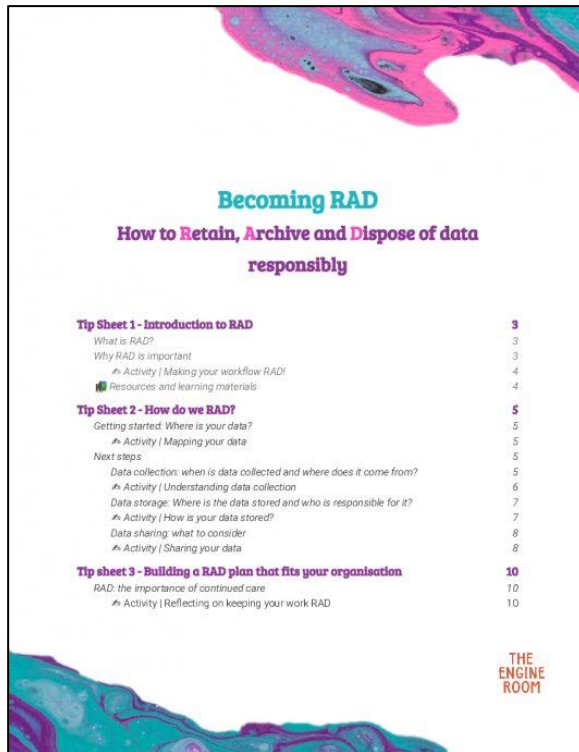
After 5 years, the project of Unicorn **will end soon** in the northern region of Akachaland. As part of the project the Unicorn team is still using some data for their daily activities with some women and children, but many have been displaced to another country, and much of the initial data is no longer operationally useful.



When do you archive the data? Which data will be anonymised and how? What about the data shared with Akachaland Care: how do you make sure they have planned a retention period and make sure to delete the data then?



Ressources / templates available



PORTAL Information Management Resource Portal Learning Corner

Responsible data management toolbox

Search

3 The legal and contractual pillar / 3.7 Data storage periods

3.7 Data storage periods

12-Sept-2023 6 mins

TABLE OF CONTENTS

- 3.7.1 How should a personal data retention period be determined?
- 3.7.2 How to implement the disposal / archiving of personal data?

This toolbox was developed by the teams of CartONG

CC BY ND

Sources: *The Engine Room/CartONG & the Responsible data management toolbox*

Key focus on deidentification

Anonymisation vs de-identification

De-identification is "the process used to **prevent a person's personal identity from being revealed**".

There are different **degrees** of identification of data (in a nutshell):



We have tried to simplify something rather complex!

A VISUAL GUIDE TO PRACTICAL DATA DE-IDENTIFICATION



What do scientists, regulators and lawyers mean when they talk about de-identification? How does anonymous data differ from pseudonymous or de-identified information?

Data identifiability is not binary. Data lies on a spectrum with multiple shades of identifiability.



This is a primer on how to distinguish different categories of data.

DEGREES OF IDENTIFIABILITY

Information containing direct and indirect identifiers.

PSEUDONYMOUS DATA

Information from which direct identifiers have been eliminated or transformed, but indirect identifiers remain intact.

DE-IDENTIFIED DATA

Direct and known indirect identifiers have been removed or manipulated to break the linkage to real world identities.

ANONYMOUS DATA

Direct and indirect identifiers have been removed or manipulated together with mathematical and technical guarantees to prevent re-identification.

DIRECT IDENTIFIERS
Data that identifies a person without additional information or by linking to information in the public domain (e.g., name, SSN)

INDIRECT IDENTIFIERS
Data that identifies an individual indirectly. Helps connect pieces of information until an individual can be singled out (e.g., DOB, gender)

SAFEGUARDS and CONTROLS
Technical, organizational and legal controls preventing employees, researchers or other third parties from re-identifying individuals

	EXPLICITLY PERSONAL	POTENTIALLY IDENTIFIABLE	NOT READILY IDENTIFIABLE	KEY CODED	PSEUDONYMOUS	PROTECTED PSEUDONYMOUS	DE-IDENTIFIED	PROTECTED DE-IDENTIFIED	ANONYMOUS	AGGREGATED ANONYMOUS
DIRECT IDENTIFIERS	INTACT	PARTIALLY MASKED	PARTIALLY MASKED	ELIMINATED or TRANSFORMED	ELIMINATED or TRANSFORMED	ELIMINATED or TRANSFORMED	ELIMINATED or TRANSFORMED	ELIMINATED or TRANSFORMED	ELIMINATED or TRANSFORMED	ELIMINATED or TRANSFORMED
INDIRECT IDENTIFIERS	INTACT	INTACT	INTACT	INTACT	INTACT	INTACT	ELIMINATED or TRANSFORMED	ELIMINATED or TRANSFORMED	ELIMINATED or TRANSFORMED	ELIMINATED or TRANSFORMED
SAFEGUARDS and CONTROLS	NOT RELEVANT due to nature of data	LIMITED or NONE IN PLACE	CONTROLS IN PLACE	CONTROLS IN PLACE	LIMITED or NONE IN PLACE	CONTROLS IN PLACE	LIMITED or NONE IN PLACE	CONTROLS IN PLACE	NOT RELEVANT due to nature of data	NOT RELEVANT due to high degree of data aggregation

SELECTED EXAMPLES

Name, address, phone number, SSN, government-issued ID (e.g., Jane Smith, 123 Main Street, 555-555-5555)	Unique device ID, license plate, medical record number, cookie, IP address (e.g., MAC address 68:AR:6D:35:65:03)	Same as Potentially Identifiable except data are also protected by safeguards and controls (e.g., hashed MAC addresses & legal representations)	Clinical or research datasets where only curator retains key (e.g., Jane Smith, diabetes, HgB 15.1 g/dl = Crsk123)	Unique, artificial pseudonyms replace direct identifiers (e.g., HIPAA Limited Datasets, John Doe = 5L7T LX619Z) (unique sequence not used anywhere else)	Same as Pseudonymous, except data are also protected by safeguards and controls	Data are suppressed, generalized, perturbed, swapped, etc. (e.g., GPA: 3.2 = 3.0-3.5, gender: female = gender: male)	Same as De-Identified, except data are also protected by safeguards and controls	For example, noise is calibrated to a data set to hide whether an individual is present or not (differential privacy)	Very highly aggregated data (e.g., statistical data, census data, or population data that 52.6% of Washington, DC residents are women)
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Techniques of de-identification

Pseudonymization is a method of replacing, at the individual level, identifiable data with a **reversible** and consistent value (e.g. a beneficiary code), provided that **this value is kept separate and safely**.

Aggregation is the merging or **grouping of data** from individuals into groups (which may in turn be pseudonymised or anonymised).

Anonymization is the process of **removing or modifying all personal identifiers**. Anonymization techniques are **irreversible**.

Name	Pseudonymisation	De-identification	Anonymisation	Aggregation
Noah	123	Age : 44 ans, Village : XX, Size HH : 12	XXXXXXXX	Groupe A
Pierre	456	Age : 22 ans, Village : YY, Size taille : 2	XXXXXXXX	Groupe A
Maar-Dipha	789	Age : 28 ans, Village : ZZ, Size taille : 5	XXXXXXXX	Groupe B

However, keep in mind that:

Pseudonymization Good practice, but it is STILL considered personal data, identifiable data with (e.g. beneficiary code), provided that **this value is kept separate and safely.**

Aggregation is to group data... and can therefore still be sensitive / cause harm to individuals or groups

Anonymization No longer personal data, but requires difficult techniques. **identifiers.** Anonymisation Humanitarian organisations therefore almost NEVER work with anonymised data

Name	Pseudonymisation	De-identification	Anonymisation	Aggregation
Noah	123	Age : 44 ans, Village : XX, Size HH : 12	XXXXXXXX	Groupe A
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Field testimony

From HI – On its mission in Syria, about the practise of pseudonymisation of databases



Questions & Answers

Do you have questions on the the topic of deidentification?



Break

Group exercise

Group discussion !

Your group will have a **topic attributed**

You are expected:

- for the topic, to **list Do's and Don'ts in terms of good practices**
- to **answer your « nut cracking » question** related to the theme

Group numbers:

1. Anonymisation- opportunity or technical challenge?
2. data as a key to better conversations between teams
3. Data destruction as the forgotten step
4. Feedback to communities to close the loop
5. Learning from the experiences of the project
6. Data sharing in questionable contexts

Anonymisation- opportunity or technical challenge?!



- **Don't plan a big anonymisation exercise on each dataset you have-** it's quite a heavy enterprise that should only be done when you have planned proper resources
- **Being creative about how to deidentify data** when you can (pseudonymisation, aggregation etc) is already a great step forward

Solutions:	OK	Full Redaction	Partial Redaction	Check Up/Down Out	Assign Alternative ID	Add Noise	Average
Variables:	Release info	Do not release alteration	Incomplete release remove certain part of the data	Collapse observations into groups (eg example: 10-15, 16-20, 21-25)	Assign you own number to each observation at random (example: 001, 002, 003, 004)	Add random numbers to a pass of numeric data	Collapse units of observation through averaging (average ages of 5 people to create a single observation)
super-variable		Stay to appear across a range of data sets					
Names							
first name	John	X			X		
last name	Brian	X			X		
middle name		X			X		
nickname	JDS	X			X		
patron signature		X					
Non-ID Characteristics							
job title							
education							
Employer's profession	Doctor						
Spouse's name	Jane						
Doctor's name	Ethan						
Identification Numbers							
ID (patient, School)		X			X		
Bank information, including bank account #							
passport #		X					
ID address							
platform specific identifier #		X					
electronic signature from a 3rd party app							
Official government-issued ID (such as social security number)		X			X		
identifier number from a 3rd party application							
Geographic							
physical address							
Resource Location	170th						

Data as a key to better conversations between teams



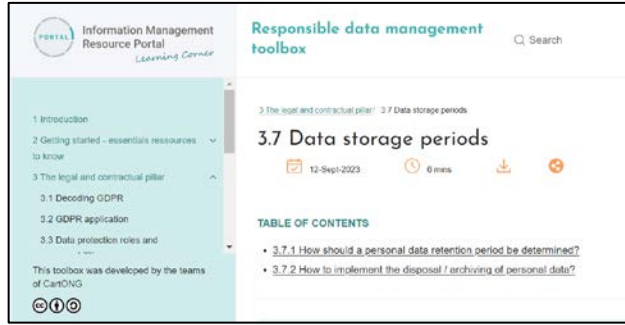
- Remember that “**Data is a team sport**” ([School of Data](#))
- Create environments in which **people are more valued than data**, working together to use data as a vector for understanding & operational efficiency



Data destruction as the forgotten step



- That final step of **deleting/archiving the data is essential** to ensure that when you might be gone on to other projects/missions, that nobody is left behind with data they don't know what they are supposed to do with



Feedback to communities & learning from the experiences of the project



Feedback to communities to close the loop

- When you are part of a survey, you like feeling that your time hasn't been wasted by seeing the result, even if it's just a few findings- think in the same way for affected populations!



Learning from the experiences of the project

- Each organisation has its own way of learning from projects, but **think about what can work best in terms of sharing of capitalisation**: learning events, peer exchange, practical trainings, awareness raising etc

Data sharing in questionable contexts



- Think of the **context**, the donor's potential **agenda**
- Discuss it with him, what you are afraid of, if you can have these types of discussions
- **Challenge** him on his practices
- **Refer** him to his organisational policies



The image shows the cover of a guidance note titled 'Responsible Data Sharing with Donors'. At the top left, it features the OCHA logo and the 'centre for humadata' logo. The title 'THE CENTRE FOR HUMANITARIAN DATA' is prominently displayed. Below it, the text reads 'GUIDANCE NOTE SERIES' and 'DATA RESPONSIBILITY IN HUMANITARIAN ACTION'. The main title 'RESPONSIBLE DATA SHARING WITH DONORS' is in a larger, bold font. A section titled 'KEY TAKEAWAYS:' lists four bullet points regarding data sharing risks, donor requests, common objectives, constraints, and steps to minimize risks.

OCHA centre for humadata

THE CENTRE FOR HUMANITARIAN DATA

GUIDANCE NOTE SERIES
DATA RESPONSIBILITY IN HUMANITARIAN ACTION

RESPONSIBLE DATA SHARING WITH DONORS

KEY TAKEAWAYS:

- Sharing sensitive personal and non-personal data without adequate safeguards can exacerbate risks for crisis-affected people, humanitarian organizations and donors.
- Donors regularly request data from the organizations they fund in order to fulfill their obligations and objectives. Some of these requests relate to sensitive information and data which needs to be protected in order to mitigate risk.
- Common objectives for data sharing with donors include: (i) situational awareness and programme design; (ii) accountability and transparency; and (iii) legal, regulatory, and policy requirements.
- Common constraints related to sharing data with donors include: (i) lack of regulatory framework for responsibly managing sensitive non-personal data; (ii) capacity gaps; and (iii) purpose limitation.
- Donors and humanitarian organizations can take the following steps to minimize risks while maximizing benefits when sharing sensitive data: (i) reviewing and clarifying the formal or informal frameworks that govern the collection and sharing of disaggregated data; (ii) formalizing and standardising requests for sensitive data; (iii) investing in data management capacities of staff and organisations; and (iv) adopting common principles for donor data management.

Peer-to-peer local exchanges

Local practises discussion in group !

You will be grouped together by **geographic zone**, to discuss common issues in responsible data responsibility:

- introduce yourselves by tackling a specific M&E topic in your geographical area,
- together, identify 1 topic of common interest among those shared, and exchange views on it

Groups are:

1. [SOUTH EAST ASIA](#) (PHILIPPINES, VIETNAM, LAOS, CAMBODIA, THAILAND)
2. [BANGLADESH / MYANMAR](#)
3. [AFGHANISTAN/PAKISTAN/INDIA/NEPAL](#)
4. [IRAQ](#)
5. [LEBANON](#)
6. [YEMEN](#)
7. [SYRIA](#)
8. [NORTHERN AFRICA / MIDDLE EAST](#) (EGYPT, LYBIA, JORDAN)
9. [WESTERN AFRICA](#) (NIGERIA, CAMEROUN, LIBERIA, SIERRA LEONE)
10. [EAST AND SOUTH AFRICA](#) (BURUNDI, RWANDA, MOZAMBIQUE, ZIMBABWE, KENYA, UGANDA, ETHIOPIA, SOUTH SUNDAN)
11. [EASTERN EUROPE](#) (ROMANIA, ALBANIA, KOSOVO, REP. MOLDOVA, UKRAINE)

Conclusion

Key messages to remember

- Much of what is required in terms of responsible data management is defined at the **planning /designing stage**, here you should mostly be **following the analysis plan/ RAD plan / SOPs/ data sharing agreements etc** defined uphill
- **There are many templates/ressources to help you** along your way / help your organisation structure/harmonise its procedures- it is not an insurmountable mountain, you will see many next week
- Some topics still lack off the shelf resources / procedures- but **follow your « responsible data » common sense** in the meantime ☐!

Do you have questions from this session?



Homework for the next session



Thank you for your attention!



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