

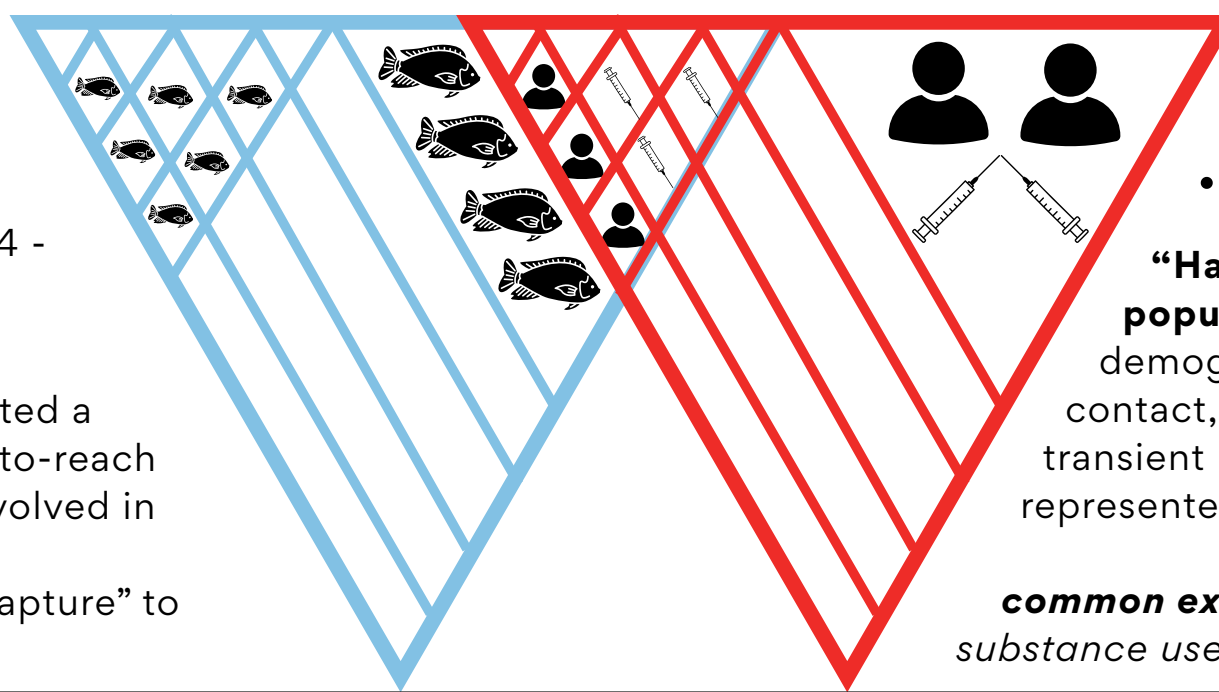
# HOW TO COUNT INVISIBLE CHILDREN?

## CAPTURE-RECAPTURE: INTRODUCTION

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### COUNTING ONLY FISH?

- Originally developed for wildlife biology (tracking fish in 1917).
- First applied to human health in 1949 to estimate birth and death rates.
- First use of capture-recapture in Poland 1994 - estimating the number of problematic drug users.
- New challenges facing civilization have created a need to apply this method to estimate hard-to-reach populations, such as migrants or children involved in armed conflicts.
- It is a reason why we are trying "capture-recapture" to count street children.



### HARD TO REACH POPULATIONS

- Capture-recapture found its use in social studies.
- especially in estimating **hidden populations**.

#### "Hard-to-reach populations (HTR)/hidden populations":

demographic groups that are difficult to locate, contact, or interview due to geographical isolation, transient living situations, or social stigmas. Often not represented in institutional records and registers.

**common examples:** *unhoused populations, individuals with substance use disorders, and **street children**.*

The process of gathering samples and reaching hidden populations is based around network sampling and the idea of social networks - often used approaches:

- Snowball sampling - participants use their social networks and recruit their peers.
- RDS (Respondant Driven Sampling) - more statistically balanced version of snowball sampling, uses additional incentives during recruitment.

### METHODOLOGY

- Take a first sample (Capture 1) and mark individuals.
- Release them and take a second sample (Capture 2).
- Estimate total population (N) by multiplying the sizes of the two samples and dividing by the number of recaptured individuals.

### KEY ASSUMPTIONS FOR ACCURACY

1. The population is closed.
2. Individuals can be matched between samples.
3. On each of the sampling occasions, each individual has the same chance of being sampled.
4. The samples are independent.

## COUNTING (INVISIBLE) STREET CHILDREN:

According to the Council of Europe "Street children" are individuals under the age of 18 who spend a significant amount of time living or surviving in a street environment. While they may not have been born on the streets and often have a registered home with their parents, their primary, day-to-day needs are met in public spaces.

#### Where they spend their time:

- Streets and backyards
- Gateways and stairwells
- Basements and attics
- Abandoned buildings

For this reason, it is so difficult to precisely define the group referred to as "street children" in our cultural context.

UNICEF estimated that there are between 90 and 150 mln street children worldwide. The European Commission makes a similar estimate. However the exact number is not known, it depends on the conditions in each country.

## MAKING CHILDREN VISIBLE



### CONCLUSIONS

- capture-recapture allows using multiple sources during estimation.
  - respondents gathered through network sampling
  - information from institutional records and registers

### REFERENCES

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### RECOMMENDATIONS

- Incorporation of the capture-recapture method in estimating street children could strongly empower practical sectors like street-working and non-governmental organizations by giving more accurate numbers to estimate needed help and fundings.
- We could stop using the term "capture" when referring to children, as it is dehumanising. Terms like "sampling-resampling" or "multiple-systems estimation" are more appropriate for social science
- Capture-recapture allows us to "see" the invisible. It is a resource-efficient tool that, when combined with social methods like RDS, can form better solutions for children than census or official government lists.