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Measuring Irregular Migration

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How fit is the available data on irregular migration for policymaking?

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SUMMARY

This policy brief is aimed at those engaged in evidence-based policymaking on irregular migration, providing an assessment and tips for use of available data on irregular migration.

Evidence-based policymaking is often considered a laudable goal – but applied to the field of irregular migration, there arise some principal challenges. Irregular migration is notoriously hard to measure as it occurs outside of regulatory norms and may often go undetected, while robust data and estimates are often non-existent, outdated or incomplete. Nevertheless, data are cited in policymaking in this area, where ‘illegal border crossings’ are used as a substitute, or outdated maximum estimates are used as a ‘low bar’ by future standards. New policies are put forward that aim to fill the gap in information, for example on ‘overstayers’ or ‘secondary movements’. This policy brief gives a 360-degree overview on what we currently know about the extent of irregular migration across the EU. Based on MirreM’s analysis and aggregation of estimates available for 12 European countries (including the UK) in the period 2016 to 2023, the irregular migrant population can be estimated at between 2.6 and 3.2 million. The previous Clandestino estimate was 1.8 to 3.8 million for the same 12 countries in 2008. This suggests that the number of the irregular migrant population has not substantially changed at the aggregate level for these countries – although there have been important changes in individual countries. In addition, the policy brief also surveys what information is available and still lacking in regard to trends and patterns of irregular movement, including what information we will have on ‘overstayers’, a key proportion of the irregular migrant population identified under the Clandestino project. We also discuss innovative methods that offer promising new ways to estimating the broader irregular migrant population. Throughout, we signpost where policymakers should treat data with care, and understand the limitations of the data they may use.

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1. WHAT DATA IS AVAILABLE?

Evidence-based policymaking in the area of irregular migration is a laudable goal – but what is feasible in a field where data is deficient?

Context

Evidence is important as a basis for effective policymaking, and policymakers can use a wide range for a variety of purposes in the policy development process. Over the past decades and in the migration field, research has demonstrated how policymakers use evidence to support enacting sound policies within increasingly politicised environments, to support the development of specific policy approaches, or to reorient their approaches. At the same time, the research-policy nexus has been a point of focus and debate, with differing perspectives considering research as feeding into policy development, policy as constraining research directions, research and policy as co-produced, or even as separate spheres following distinct logics (Boswell & Smith, 2017).¹

What does this mean for policymaking in the area of irregular migration – given the fact that the population itself may not be captured by official data sources, and data may be incomplete? What kind of evidence can policymakers use, and what are the caveats they should be aware of?

In the absence of reliable data on irregular stay, policies in the last decades have focused on preventing irregular entry. These related ‘flows’ and associated statistical indicators (such as border apprehensions) are also more visible. By contrast, research has pointed to the fact that a significant share of irregularly staying migrants in fact arrived regularly at some point but became irregular because, for example, their authorised stay ended and they overstayed, or they lost their status. Conversely, many of those irregularly crossing a border are found to be in need of international protection after lodging an asylum claim and never become part of the irregularly staying population. However, without data on trajectories of migrants, incorrect assumptions about the main pathways into irregularity prevail. This said, a recent study was able to show on the basis of available data that the majority of migrants apprehended at borders are likely to be refugees (Savatic et al., 2024).

Inaccurate or incomplete data on irregular migration can be equally important in terms of the potential impact it could have for policies and the knock-on effects such policies can have on irregular migrants. Despite the growing attention to the topic of irregular migration over the last decade, the most recent comprehensive and robust EU-wide estimate of the number of irregular migrants present

¹ The EU Horizon-funded project INNOVATE aims to interrogate these questions further in the migration field, aiming to enhance dialogue between research and policy actors in this field. For more information, see <https://migrationpolicycentre.eu/innovate-project/>.

in the EU dates back to 2008 and put the irregular migrant population at between 1.9 to 3.8 million for 27 European countries (CLANDESTINO Project, 2009).² Several EU policy documents have used the upper threshold of 3.8 million as a ‘low bar’ for the potential size of the population, without any methodological underpinning.³ The new MIRreM analyses of existing data indicate that the overall estimate of the irregular migrant population in the 12 European countries covered by MIRreM was between 2.6 and 3.2 million in the period 2016-2023. The comparable figure for 2008, which MIRreM calculated on the basis of individual country estimates compiled by Clandestino, was between 1.8 and 3.8 million.⁴ Therefore, the MIRreM aggregate estimate increases the low estimate by 780,000 and decreases the high estimate by 460,000, creating a clearer picture of the total irregular migrant population. This still leaves a significant range in which changes in the irregular migrant population since 2008 cannot be discerned. It is evident, however, that the overall number of irregular migrants in Europe has not substantially changed – contrary to the prevailing public narrative of a continuous rise – because available evidence does not support this claim.

The role of data on migration, asylum, irregular migration, etc. will gain even more importance within the framework of the EU Pact on Migration and Asylum.⁵ For the purpose of evaluating the migratory situation in EU Member States for the management of migratory situations, the Commission, the European External Action Service, the EU’s Asylum Agency, the European Border and Coast Guard Agency, Europol, the European Union Agency for Fundamental Rights and eu-LISA will collect and analyse information on the migratory situation. A European Annual Asylum and Migration Report is foreseen, based upon various data sets, including also on data on irregular migration such as “the number of third-country nationals who have been detected by Member States authorities while not fulfilling or no longer fulfilling the conditions for entry, stay or residence in the Member State, including overstayers” or the numbers on refusals of entry.

This policy brief therefore aims to highlight, based on the research conducted under the MIRreM project, what data are (or may soon be) available on the irregular migrant population in the EU, as well as how this data should be treated as evidence in policymaking.

² A subsequent study conducted by the Pew Research Centre (Connor & Passel, 2019) by and large put the irregular migrant population at a similar scale, but was criticised on methodological grounds and challenges in applying the residual method as developed in the US context in Europe.

³ This includes recent policy documents but was also the case for some contemporary to the Clandestino project, for example see: EMN, 2020; Frontex, 2010.

⁴ The Clandestino project prepared aggregate estimates for the EU15, EU25 and EU27, the latter referring to 2008 only. The EU27 estimate was calculated on the basis of country estimates of the irregular migrant population for 20 countries, drawn from 12 country studies prepared by the project, as well as other sources for 8 countries not covered. For the remaining 7 countries, values were extrapolated.

⁵ The EU Pact on Migration and Asylum established a common approach across the EU to managing migration, including also as regards asylum. It represents a package of policy proposals, building on previous ones, aiming at managing migration flows to the EU and reinforcing the EU’s external borders. The Pact was initially proposed by the Commission in 2020, and adopted by the Council in 2024.

Definitions

Irregular migration:

In MirreM, irregular migration is operationally defined as a form of migration that is not ‘regular’, ‘unlawful’, or not according to the rules. It covers both unlawful entry and stay. In the EU context, irregular residents are third-country nationals (TCNs) that are a) either without any legal residence status in the country in which they are residing; or b) those who possess an authorisation of some sort, yet whose presence in the territory – if detected – may be subject to termination through an order to leave and/or an expulsion order because of their activities (e.g., visa-free citizens engaging in work, students working more than permitted, or persons with falsified documents). (Kraler, 2023; Kraler & Ahrens, 2023)

Migrants with a provisional status:

In MirreM, we distinguish migrants with a provisional status from both migrants in an irregular situation and migrants with a fully-fledged legal status. Migrants in this category include, amongst others, asylum seekers or migrants whose removal has been suspended.

Stocks and Flows:

Stocks refer to the total population size in a given territory during a particular year, while flows are the events that increase (inflows) or decrease (outflows) migrant stock within a given territory during a certain period.

In MirreM, stocks refer to non-nationals present in the country at a particular time without any status, those who breach the conditions of their stay, unregistered persons with false papers and/or identities and those issued a return decision who are not yet removed. In terms of flows, this refers to in- and out-flows of demographic (birth, death), geographic (in-migration, return, onward migration) and status-related (e.g. overstaying, negative status decisions, regularisation, etc) nature that impact on and change the extent of the irregular migrant population.

Estimates and indicators

Estimates refer to statistical calculations or approximations that quantify both observed and non-observed or unknown irregular migration flows. **Indicators**, on the other hand, refer to metrics or variables that relate only to observed or known irregular migration flows.

In other words, indicators of irregular migration flows show the number of actual observations or cases, such as border apprehensions, whereas estimates use indicators to come to conclusions about a broader trend, including non-observed components, such as the total number of adults, detected and undetected, who crossed into a country without the legal right to do so. Eurostat’s compilation of statistics on asylum and the enforcement of migration legislation serves as an example of indicators covering irregular flows such as refusal of entry at the external borders, orders to leave, and returns.

Stocks – who do we think is here?

The number and quality of estimates on the scale of irregular migrants present in a country (stocks) **vary widely across countries and administrative levels**, based on a number of factors. This includes the type of information available in respective countries (e.g. municipal registers, censuses, registered users of NGO or social services, etc.), the methodology used to produce the estimates, the scope of the estimate (e.g. city or national estimates), level of detail (e.g. on subgroups such as gender or children), and – importantly – how that country *defines* ‘irregular migrants’. For some countries, the estimate includes not only those who are ‘not lawfully resident’, but also could include those who may be at risk of falling out of

status (as in the case of Canada and the UK) or those who hold provisional or non-deportable tolerated status (as in the US).⁶ Importantly, many estimates do not consider the duration of stay, making it impossible to apply commonly used distinctions in migration statistics between: i) temporary ‘visitors’ with up to 90 days of residence, ii) temporary migrants (staying between 90 days and one year) and iii) migrants in an irregular situation (staying longer than one year). The lack of information on duration of stay in turn also creates issues in the comparability of estimates.

For example, the Austrian estimate for 2022 in Table 1 aimed to estimate the permanent irregular migrant population, i.e. those staying for at least one year, assuming that only half of those estimated to be in an irregular situation using a multiplier method would meet the criterion. By contrast, the Austrian estimate for 2008 simply reports the direct results of the method without factoring in duration of stay. In addition, the 2022 estimate includes EU citizens, whereas the 2008 estimate focuses on third-country nationals. At first glance, the values appear to be very close, while in fact they cannot be compared – and have to be adjusted to be comparable.

Within the MirreM project, researchers collected available information on recent estimates of the **stock of irregular migrants at the national level**, as well as **how those estimates compare to those produced in 2008** under the Clandestino project. Taking the most recent estimate of at least medium quality provided estimates dating from 2016 to 2022. These estimates have primarily been taken from external sources, have no harmonized methodology and **each come with their own set of limitations**.

Uncertainty

Statistical data on the size and composition of population stocks are a basic foundation for any systematic sociological enquiry and the irregular migrant population is no exception. Yet, as noted above, the irregular migrant population is specific, since **its size and characteristics are not directly observable** (e.g. from administrative register, conventional sample surveys or censuses) **and require estimates. These always come with uncertainties**, linked both to assumptions on which estimation methods are based and statistical uncertainties. Some estimation methods provide quantitative measures of uncertainties, e.g. ranges in which the real number is likely to lie at with a certain level of probability. Other methods result in point estimates that provide a false impression of precision, if the caveats are not communicated clearly. These points should be taken into consideration in viewing Table 1.

⁶ This caveat does not apply to the estimates included in Table 1.

Table 1: Country-level estimates of the irregular migrant population

Country	Year	Est. Irregular Migrant Population		Change since Clandestino
		Min	Max	
Austria	2022	62,000	62,000	Increase
	2008	18,439	54,064	
Belgium	2016	112,000	112,000	No change
	2008	88,000	132,000	
Finland	2020	700	5,000	Decrease
	2008	8,000	12,000	
France	2017	200,000	300,000	No change
	2008	178,000	400,000	
Germany	2017	600,000	700,000	Increase
	2008	195,845	457,015	
Greece	2017	100,000	200,000	Decrease
	2008	172,000	209,000	
Ireland	2017	15,000	20,000	Decrease
	2008	30,123	62,340	
Italy	2022	458,000	458,000	No change
	2008	279,200	460,680	
Netherlands	2018	23,000	58,000	Decrease
	2008	62,320	130,999	
Poland	2019	6,000	48,000	Decrease
	2008	50,000	300,000	
Spain	2019	391,000	469,000	Increase
	2008	280,000	353,927	
UK	2017	594,000	745,000	No change
	2008	417,000	863,000	
12 European countries above	Various years (2016-2022)	2,560,000	3,180,000	No change
	2008	1,800,000	3,500,000	
US	2022	11,080,000	11,620,000	No change
	2009	11,200,000	11,500,000	

Note: Please see box on ‘uncertainty’ to provide context understanding in the reading of this table.

Across countries for which estimates were available, MirreM found that, comparing the new MirreM aggregate estimate to the older Clandestino one, the new estimate of 2.6 to 3.2 million irregular migrants across the 12 European countries covered, suggests no definitive change in the overall number of the irregular migrant population in Europe since 2008. In terms of specific countries, moreover, no significant change in the irregular migrant population was noted for five countries (Belgium, France, Italy, the UK and the US), three countries noted an increase (Austria, Germany and Spain), and five a decrease (Finland, Greece, Ireland, Netherlands and Poland) (see Table 1). Overall, these estimates suggest that **the irregular migrant population across the 12 European countries pictured above has remained relatively stable since 2008**. Use of the Clandestino upper estimate as a low bar, therefore, may not be an appropriate consideration of the irregular migrant population change in the last 15 years.

Table 2: Local level estimates of the irregular migrant population

City	Year	Est. Irregular migrants	
		Min	Max
Amsterdam	2021	10,000	25,000
Greater London	2020		397,000
The Hague	2021	4,000	10,000
Milan	2021		43,000
Rotterdam	2022		10,000
Utrecht	n.d.		5,000

Recent estimates of the irregular migrant population also exist at the local level (see Table 2). While those data are not usually collected by municipalities themselves (London being the exception in the MirreM research), some cities find the information essential to adapt service provision and policy

responses. However, in some cities, there is a conscious decision not to collect data in order to protect migrants, fearing that any estimate could be misrepresented and used to inform hostile policies, or incite divisiveness by vigilante groups. Moreover, the political climate may preclude the development (or use of) such estimates. This includes the (non-)availability at the local level of budget to develop such estimates, if estimates may not align with prevailing public discourse on the prevalence and relevance of the irregular migrant population for the locality. Sometimes, the political priorities of the city administration and public discourse, rather than evidence, leads policy development, also at the local level.

Flows – who is arriving and leaving?

Estimates of the irregular migrant population highlighted previously provide a snapshot of the specific population at a specific time. While regularly updated stock estimates can provide some information on population trends, and in some cases also on trends regarding demographic characteristics of the irregular migrant population, only data and estimates on irregular in- and outflows provide more details on the components of change of the irregular migrant population. Yet, these are only available in a very incomplete manner. Certain flow indicators are highly visible in the public sphere, with intense public and political debate on those crossing borders irregularly, particularly by sea. Yet, **there are almost no available estimates of irregular migration flows.**⁷

⁷ In MirreM, the US is the only country covered with statistically robust flow estimates.

This is because to estimate irregular flows and elaborate on the related patterns and trends, researchers must extrapolate based on data that does not always match. As with data on the stock of irregularly present migrants, and as already established under Clandestino 15 years ago, there is still ambiguity and a lack of consensus on what constitutes irregular migration, and therefore which data would be useful in developing an accurate estimates of irregular migration flows. While asylum applications are often used in public debates as indicators of irregular inflows, negative decisions on asylum applications are a more meaningful indicator of inflows into irregularity as a negative asylum application leads to a revocation of status and an obligation to leave. Other data such as detections of ‘illegal border crossing’, or refusals of entry are often used in public discourse, but both have considerable limitations in terms of how much they can tell us about irregular inflows.

Moreover, to elaborate on trends and patterns, there is still a reliance on data related to those documented entering or leaving the country, those who lose status through negative asylum or other protection-related decisions, or conversely, those whose status is regularised. Information on how the population changes over time due to births or deaths are still not available across the EU (see Table 3 for an overview of indicators used to estimate irregular migration flows). Similarly, no data exist on overstayers. This said, the planned Entry-Exit System and the related European Travel Information and Authorisation System (ETIAS) are designed to provide some of these data (see Table 3). MlrreM researchers have analysed air passenger data to explore the potential and patterns of overstaying (Recchi & Bernasconi, 2024).

Table 3 Selected indicators of irregular flows for EU-level analysis

Type of flow	Indicators	
	Inflow	Outflow
Demographic flows	<ul style="list-style-type: none"> • Births in irregularity (parents without status) • Failure to obtain a status for the child 	<ul style="list-style-type: none"> • Deaths in irregularity (may or may not be related to migration)
Geographic flows	<ul style="list-style-type: none"> • Refusals of entry at the external border • Border apprehensions either at external border areas or inland within the national territories 	<ul style="list-style-type: none"> • Return decisions (otherwise known as orders to leave or expulsion orders) • Returns after an order to leave (voluntary or forced) • Onward migration
Status-related flows	<ul style="list-style-type: none"> • Negative asylum decisions • Withdrawal of status • Visa overstaying 	<ul style="list-style-type: none"> • Regularisation • Change in personal circumstances entitling to stay • Acquisition of provisional status

Note: Adapted from the MlrreM taxonomy of migrants with a precarious status (Kraler & Ahrens, 2023). Items in bold are indicators covered in Eurostat’s asylum and enforcement of migration legislation statistics.

While images of irregular arrivals have captured the public’s imagination, they do not provide a sufficient basis for understanding the characteristics of the irregular migrant population and the relative weight of different components of population change. There are some novel methods being tested to estimate these populations, also within MlrreM, but as of yet data is still incomplete.

New data sources: potential and limitations⁸

As mentioned above, data on ‘overstayers’ is a key area of policy development at the EU level. An EU-wide system to electronically register the entries and exits of third country nationals coming to the EU for short-term stays (Entry/Exit System (EES)) was adopted with a wider set of measures known as the ‘Smart Borders package’ in 2017 and 2018. At a basic level, the EES would identify those who have not yet had a registered exit after 90 days, thereby overstaying their permission to stay. Paired with it is the European Travel Information and Authorisation System (ETIAS), which collects basic information from visa free travellers and green lights their travel before departure. The two systems are planned to be operational as of end of 2024 (EES) and in 2025 (ETIAS). Together, they will collect an enormous amount of data from those coming to the EU for short-term stays (90 days within 180 days), either visa-free or with Schengen visas.

The main purpose of these new systems as set down in the legislation is to combat irregular migration and improve internal security, including by detecting overstayers. It does so by firstly analysing this and other data (such as from Member States or the WHO on health risks) to develop screening rules for the approval or rejection of new authorisation requests. Secondly, by making these (and other related) systems in the fields of borders, visa, police and judicial cooperation, asylum and migration interoperable – in other words, allowing data across these various systems to be cross-checked. In this regard in particular, the European Data Protection Supervisor, the EU Fundamental Rights Agency, Frontex’ Fundamental Rights Office and civil society **have highlighted the risks and potential impact** of these systems and analysis based on the data collected by these systems, particularly on individuals’ rights to data protection, privacy, non-discrimination and other fundamental rights as laid down in EU law.⁹ Moreover, civil society actors have criticised the systems as further underpinning control systems and surveillance, their potential for contributing to a more draconian detention and deportation approach across the EU and for associating irregular migration with serious crimes such as terrorism. As currently laid out in the legislation, this is not the purpose of the systems, but as one may observe with the changes made to the EURODAC database (discussed later on), the purpose of and data collected within these systems can and do change over time.

Will this new EES provide policymakers with data on ‘overstayers’, then? Yes and no. Once operational, it should provide information on those who overstay EU short-term stays, however, data on those who overstay national visas or residence permits would still not be available (particularly as not all EU countries have their own national Entry/Exit System). Relatedly, there is a lack of

⁸ This analysis draws also on interviews conducted with key stakeholders, from the following institutions: the European Border and Coast Guard Agency (FRONTEX) Fundamental Rights Office; European Commission, Department for Migration and Home Affairs (DG HOME); European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (eu-LISA); Centre for European Policy Studies (CEPS); International Centre for Migration Policy Development (ICMPD); two anonymous EU bodies; an anonymous NGO; and an academic expert.

⁹ Interoperability is highlighted in legislation and policy documents as a main cross-cutting aim across the development of these and other systems, in terms of the potential thereby to identify potential security threats among those entering and leaving the EU, for example those committing identity fraud or with serious criminal offences. Yet this approach has also raised serious concerns related to data protection and privacy, in particular relating to access to personal data; discriminatory profiling, including through the use of automated risk assessment through discriminatory algorithms; purpose limitation and proportionality given the enormous investment that would be required to track and deport those identified by the system. In this context it is relevant to recall that overstaying per se is not a criminal act.

understanding of the proportion of overstayers who overstay their short-term permissions (which will be recorded under EES) as compared to those who overstay longer permits (which is not recorded systematically across the EU).

Thus, the **information policymakers will have on ‘overstayers’ from EES should still be treated carefully**. The data will represent the individuals who have not had a registered exit from the 29 European countries¹⁰ that will use the EES. If some countries are not able (or willing) to register exits or entries effectively, the list may not be accurate. There also still exist valid reasons for overstaying one’s permission for short-term stay (e.g. illness or injury, force majeure). From an operational perspective, these issues should be resolved with time. Yet, in the meantime, the data must be treated with care and the fundamental rights impacts monitored, including in terms of usage of these data. While one may see the above as a call for other systems to collect ‘more data’ or ‘better data’ on overstayers, policymakers should consider that there may be more cost-effective, proportional, less intrusive, and even more innovative ways to obtain this information.

At the same time, the Pact on Asylum and Migration has also brought far reaching changes to one of its central databases, namely EURODAC, in terms of additional data that will now be included in the database. In preparing the Pact on Asylum and Migration, it was also considered that EURODAC could contribute to the “fight against irregular migration” by storing fingerprint data under all relevant categories and allowing comparisons to be made with all stored data for that purpose. Therefore, EURODAC’s scope has been extended “for the purposes of identifying illegally staying third-country nationals and those who have entered the European Union irregularly at the external borders, with a view to using this information to assist a Member State to re-document a third-country national for return purposes.” (European Commission, 2016).

Until present, EURODAC only compared fingerprint data taken from irregular migrants and applicants for international protection against asylum data because it is considered an asylum database. Comparisons were not made between fingerprint data taken from irregular migrants at the external borders and fingerprint data taken from third-country nationals found illegally staying on the territory of a Member State. This will change under the recently adopted EURODAC Regulation, which will come into force 12 June 2026.

Missing data

The existing quantitative data and indicators about irregular migration can only provide a snapshot. For example, stock estimates usually provide a number of the probable irregular migrant population at particular points in time, and sometimes the structure of the population, in some cases a time series. Similarly, data generated when irregular migrants come into contact with authorities provide limited information about certain groups (e.g. those apprehended at borders or issued deportation orders; etc) but tell us little about the experiences of other irregular migrants not recorded by state authorities. In addition, **available data are seriously flawed**. For example, there are no clear rules on how statistics on apprehensions of migrants found irregularly staying should be collected. Often, such statistics provide cumulative numbers of apprehensions, potentially double-counting persons who are apprehended more than once in a given calendar year.

¹⁰ Austria, Belgium, Bulgaria, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland.

This is even more serious if statistics are cumulated on the European level, as has been noted during the 2015 migration and refugee crisis when Frontex figures of detections were shown to double count irregular migrants entering through Greece and again at the Hungarian border, leading to inflated numbers of irregular arrivals in the EU (Sigona, 2015). Similarly, return decisions in different EU member states are simply aggregated, even if they may be linked to the same person receiving multiple decisions from different Member States. To some extent, low return rates may thus also be an artefact of inflated numbers of return decisions – alongside other factors such as problems in accurately capturing voluntary and unassisted returns.

What is **consistently lacking are longitudinal data** concerning the population in an irregular situation, and particularly information regarding migrants' trajectories that would capture changes across time and across geographic territories. Additional efforts to collect such data could tell us more about, legal status trajectories of migrants over time, i.e. loss of their status or (temporary) acquisition of legal status, or transition into a permanent status or indeed citizenship as well as about their pathways into and out of irregularity. One notable source of such information is the [French 'Trajectoires et origines' survey](#) by INED, which provides information on migrants' status trajectories, including their legal status upon arrival (Beauchemin et al., 2023). In a similar vein, Ireland has used its recent regularisation programme implemented in 2022 to collect information on entry routes of subsequently regularised migrants, alongside other information.

In addition, while **'secondary movements'** of migrants are a highly contentious issue in Europe, little reliable information on the phenomenon exists, nor is there an agreement how these moves should be conceptualised and what should be counted. These ongoing mobilities of migrants are also referred to as 'onward migration' or 'multiple migration'. Research has shown that irregular secondary movements often involve migrants with some sort of legal status in one country that either is provisional (e.g. as asylum seekers) or does not allow residence in another EU Member State unless a separate permit is obtained (e.g. recognised refugees or permanent residents under national law but without an EU long-term residence permit). The extension of the EURODAC system might provide more details on the scale of some secondary movements, although data will need to be read with caution.

As noted above, there is hardly any information about **how long migrants remain in an irregular situation** and the effect this has on **their socio-economic situation**. Again, the French *'Trajectoires et origines'* survey provides some information on this aspect. Some insight can also be gained from the Spanish municipal register (*Padrón*) which allows all foreigners to register if they can prove residence, also providing information on duration of stay. In addition, past large-scale regularisations (Spain, Italy, Ireland, etc.) can provide limited retrospective inferences concerning migrants' duration of stay. In Spain, data from various sources – regularisations based on the different *arraigo* channels, the Padrón and social security – have recently been [cross-tabulated](#) to provide information on the average duration of stay of regularised migrants before regularisation. In the past, the [Migrations between Africa and Europe \(MAFE\) project](#) conducted biographic surveys with migrants originating from three African origin countries across six European destination countries, which provided data about status changes and geographic trajectories.

New methods

The MirreM project has considered traditional and novel methods to estimate the irregular migrant population, and test some of the innovative methods, such as use of social media data, flight

passenger data, or mortality registers. In an initial scoping study, Rodriguez Sanchez & Tjaden (2023) assessed a variety of methods used to estimate irregular migration (both stocks and flows): from more traditional sources such as registers, censuses, specialised surveys, regularisation data, irregular border crossing and apprehensions – to innovative sources such as consular registers, driver’s license data, data on missing or deceased migrants, online search results, and data on consumption of food and other goods.

They found that since Clandestino, approaches to estimating irregular migration have become more diverse and more complex – yet **we are still no closer to a ‘gold standard’ to estimate irregular migration. Approaches are still highly fragmented** depending on the type of data used and whether it is available for a specific country, limiting broader comparability and development of multi-country or EU-wide estimates. Moreover, given that each source used has limitations in terms of how far it can be used to estimate the wider population – they highlight that with each additional data source included in building an estimate, these challenges and uncertainties multiply. As the bias in estimates using established methods and data is largely unknown, new estimates lack appropriate ‘true’ references against which to compare and assess the accuracy. Simulation studies and the **use of digital data (such as social media data) offer promising opportunities for the future** as well as combining various different data sources.

At the same time, engaging these new methods must be done so carefully, in consideration of the concerns raised by civil society and others on the use of digital technologies for surveillance and migration control, including return. Fundamental rights concerns such as data protection, privacy and non-discrimination are equally paramount, especially where personal data may also be collected by such methods, for example in usage of social media or similar data. As with concerns raised on the EES and ETIAS, **these methods should be carefully considered in terms of the potential impact** they may have on fundamental rights and how they may contribute to broader migration control infrastructures.¹¹

¹¹ Such concerns have been set out specifically as related to using social media and other novel data to develop trend analysis and forecasts related to irregular migration (for example: <https://privacyinternational.org/advocacy/3289/privacywins-eu-border-guards-cancel-plans-spy-social-media-now>) and for broader migration control infrastructures (for example: <https://balkaninsight.com/2022/07/07/eus-frontex-tripped-in-plan-for-intrusive-surveillance-of-migrants/>).

2. HOW SHALL IRREGULAR MIGRATION DATA BE USED?

... with care!

Based on the above – what we have, what we will have, what we still miss – how therefore should policymakers treat data on irregular migration in policy development? In short – **with care**. In the below, we outline a few key takeaways that should be considered in using estimates or numbers related to irregular migration.

First, and foremost, we need to **acknowledge that all statistical indicators and estimates on irregular migration come with important limitations and uncertainties**. Estimates therefore need to communicate more clearly what they measure and what they do not, as well as on the limitations and uncertainties related to them. It is equally important to be precise when using statistical indicators or estimates that measure particular dimensions of the phenomenon, for example by referring to the actual concept measured (e.g. border detections, maritime arrivals, confirmed returns, etc.) rather than presenting them as indicators of larger concepts (irregular immigration, return, etc.). As research has demonstrated, some 84% of migrants arriving in the Mediterranean in 2015 came from the 10 most important refugee producing countries, thus are more accurately described persons in search for protection (Crawley et al., 2016).

Second, estimates collected within MirreM suggest that the **scale of irregular migration has not greatly increased** at country and EU level since the Clandestino estimations in 2009 (CLANDESTINO Project, 2009). Recent estimates from 2019 (Connor & Passel, 2019) arrived in essence at an approximately similar scale. Despite the fact that available data suggest that at the EU level the scale of irregular migration has not greatly increased over the last two decades, the attention on the subject has. The latter is evidenced by broad reference towards irregular migration flow and stocks for justifying policies under the Pact on Migration and Asylum.

Third, the Pact on Migration and Asylum and Smart Borders promises a broad set of new available data and means to analyse existing data. However, the data will only include overstayers of EU short term visas and will thus not provide a full picture. Also, the extended EURODAC data exchange will allow for more data comparison of movements of irregular migrants, but equally will have its limits. At the same time there are high expectations on these new data sets, which calls for the **need for managing expectations of what the new data will and what the new data will not be able to tell**. But we also need to understand that data are not a panacea. While we call on evidence-based policymaking in the migration field, policies **collecting (more) data always need to be proportional to its aims and in line with EU law**. Other methods (e.g. innovative methods) could be considered.

Fourth, since Clandestino, several data blind spots continue to exist which would be necessary to fill in order to come up with EU-wide estimates on the irregular migratory population: little is known about irregular migration patterns such as for example whether indeed the majority arrives regularly and overstays. Equally, blind spots expectedly will continue about secondary movements, reasons to travel to one or another EU country or any broader trends of irregular arrivals. There are also

persistent gaps with return data, particularly with regard to unverifiable returns. In this regard, **more regular estimation efforts should be undertaken**, including efforts by Eurostat to facilitate exchange on good practices and methods that can easily be upscaled, such as building estimates based on mortality rates (Surkyn, 2024). Moreover, more efforts need to be undertaken to **harmonise flow indicators and to reduce double count**. This will require data exchange and related efforts to anonymise data to address legitimate concerns over data protection and privacy.

Fifth, data on irregular migration is commonly employed by political parties to promote more or less migration control in line with political agendas. Figures on irregular migration – particularly very high ones – are welcomed and picked up by media and inflammatory tabloids. Ultimately such misuse poses a significant danger to the public discourse and public trust in migration management, reinforcing biases and inciting unwarranted fear or outrage. As such, it also negatively impacts on and endangers those individuals who are the targets of such speech and policies, including migrants or minority groups. Such **irresponsible handling of data undermines informed decision-making and democratic discourse**, leading to a misinformed public that is more susceptible to manipulation and less capable of engaging in meaningful, fact-based discussions.

Finally, and regarding the knowledge gained in MirreM, we are in many ways further than we were back when Clandestino came up with its estimates. Despite all the mentioned caveats, we do have more data available and data that has previously been considered sensitive and has not been regularly available on the European level – such as apprehension data – are now readily available from Eurostat’s Enforcement of Immigration Legislation (EIL) data collection and – for data on detections of unlawful border crossings at the EU’s external borders – from FRONTEX. Moreover, technology is far more advanced than it was 15 years ago. Research under MirreM has identified and tested a number of promising estimation methods, opening new avenues to quantifying different aspects of irregular migration, including the size and structure of the irregular migrant population, the size of the irregular migrant population working in the informal economy, the possible scale and dynamics in overstaying, and experiences of irregular migrants, while also assessing the practical implementation of such methods, giving hope that more regularly available and more robust quantitative measures on different aspects of irregular migration are indeed feasible in the near future. However, given the hidden nature of the phenomenon, any data and estimates will inevitably be linked to uncertainty and therefore need to be used with caution to avoid abuse.

This policy brief is based on:

Kierans, D., Vargas-Silva, C., Ahmad-Yar, A. W., Bircan, T., Cacciapaglia, M., Carvalho, J., Cassain, L., Cyrus, N., Desmond, A., Fihel, A., Finotelli, C., Gonzalez Ramos, M. P., Heylin, R., Jauhainen, J., Kraler, A., Leerkes, A., Nikolova, M., Rössl, L., Santos, S., ... Sohst, R. R. (2024). *MirreM Public Database on Irregular Migration Stock Estimates (Version 2)*. Krems: University for Continuing Education Krems (Danube University Krems).

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Kierans, D. and Vargas-Silva, C. (2024). *The Irregular Migrant Population of Europe*. MirreM Working Paper No. 11. Krems: University for Continuing Education Krems (Danube University Krems).

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<https://doi.org/10.5281/zenodo.13857073>

*These two references provide information on **stocks**: a public database provides information on existing irregular migration stock estimates and is accompanied by a technical report and codebook, while the working paper provides an in-depth analysis of the stock estimates.*

Siruno, L., Leerkes, A., Badre, A., Bircan, T., Brunovská, E., Cacciapaglia, M., Carvalho, J., Cassain, L., Cyrus, N., Desmond, A., Fihel, A., Finotelli, C., Ghio, D., Hendow, M., Heylin, R., Jauhiainen, J.S., Jovanovic, K., Kierans, D., Mohan, S.S., Nikolova, M., Oruc, N., Ramos, M.P.G., Rössl, L., Sağiroğlu, A.Z., Santos, S., Schütze, T., & Sohst, R.R. (2024) *MIRreM Public Database on Irregular Migration Flow Estimates and Indicators*. Krems: University for Continuing Education Krems (Danube University Krems). <https://doi.org/10.5281/zenodo.10813413>.

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*These two references provide information on **flows**: a public database provides information on existing irregular migration flows estimates and is accompanied by an in-depth analysis of the estimates.*

Leon, L., Cherti, M., Ambrosini, M., Bonizzoni, P., Cacciapaglia, M., Heylin, R., Mohan, S., Rakowska, K., & Siruno, L. (2024). *Local-level indicators and estimates of the irregular migrant population*. MIRreM Policy Brief No.2. Krems: University for Continuing Education Krems (Danube University Krems). <https://doi.org/10.5281/zenodo.10853356>

*This policy brief discusses estimates available on irregular migration at the **local level** and what to have in mind in using them.*

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*This policy brief outlines the **ethical dimensions** to be considered when developing and using irregular migration estimates.*

Rodríguez Sánchez, A., & Tjaden, J. (2023). *Estimating Irregular Migration – A Review of Traditional and Innovative Methods*. MirreM Working Paper No.4 (version 2). Krems: University for Continuing Education Krems (Danube University Krems).
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*These papers assess and employ traditional and novel **methodological approaches** to measuring irregular migration.*

THE MIRREM PROJECT

MirreM examines estimates and statistical indicators on the irregular migrant population in Europe as well as related policies, including the regularisation of migrants in irregular situations.

MirreM analyses policies defining migrant irregularity, stakeholders' data needs and usage, and assesses existing estimates and statistical indicators on irregular migration in the countries under study and at the EU level. Using several coordinated pilots, the project develops new and innovative methods for measuring irregular migration and explores if and how these instruments can be applied in other socio-economic or institutional contexts. Based on a broad mapping of regularisation practices in the EU as well as detailed case studies, MirreM will develop 'regularisation scenarios' to better understand conditions under which regularisation should be considered as a policy option. Together with expert groups that will be set up on irregular migration data and regularisation, respectively, the project will synthesise findings into a Handbook on data on irregular migration and a Handbook on pathways out of irregularity. The project's research covers 20 countries, including 12 EU countries and the United Kingdom.

More information on the project is available at <http://irregularmigration.eu>.

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