

A number of early warning signals were identifiable in the years prior to the 2015/16 refugee surge in Europe, yet the world was caught off-guard by mass migration movements from the Middle East and Africa. In the past, this has also been the case in the context of most major geopolitical or environmental shocks. Capacity to anticipate all but directly-regulated migration flows appears to be quite weak. The possibility for transit and destination countries to anticipate both forced and legal migration flows is however critical in order to ensure effective management of asylum, migration and integration systems. Recently, some OECD and EU countries have developed tools to predict short or longer-term migration trends or to assess migration uncertainties and risks, but many countries still have quite limited capacities in this domain.

This edition of **Migration Policy Debates** presents the results of a stock-taking exercise of existing practices for better anticipating different types of migration movements. It brings key lessons learnt from the joint EASO-OECD conference “From panic to planning: unpacking the policy toolbox to anticipate migration trends” (Paris, June 2016) and presents lessons for improving information systems to reinforce the preparedness of reception and management systems.

Can we anticipate future migration flows?

- There are different tools to anticipate and predict future migration flows, and which one to use, and when depends on the type of movements being monitored and on the timeframe considered. These tools include early warning systems, modelling and programming tools as well as foresight methods.
- Early warning and alert systems based on monitoring flows in real time require significant resources and information sharing between countries as well as updated intelligence on the functioning and the evolution of smuggling networks.
- Early warning systems based on risk analysis require a good understanding of trigger points to minimise the risks of ignoring relevant signals (false negatives) and of overstating irrelevant signals (false positives).
- In order to effectively anticipate the scope of looming migration surges and destination countries targeted by migrants, early warning and alert systems should be linked to the analysis of diaspora populations and social networks.
- Modelling tools of forced migration flows have been developed and are run by a number of countries notably to estimate arrivals of asylum seekers. These efforts are, however, resource-intensive and relatively fragile, notably in the context of major external shocks.
- Modelling and programming are rarely used to forecast temporary or permanent legal migration flows, including family migration. Except in settlement countries (such as Australia, Canada, New Zealand), most OECD countries don't know how many permanent migrants to expect from one year to the next which limits the capacity of the settlement and integration services to anticipate needs especially at the local level.
- In order to be effective and potentially induce policy change, foresight methods should be developed around some reasonable timeframe (less than 10-15 years) and focused on specific migration categories or corridors.
- EU instruments for anticipating and monitoring forced migration are widely used, but more could be done to strengthen co-ordination efforts within and beyond the EU, with transit countries and with other OECD countries.
- Whatever is the information system adopted, building trust with policy makers is critical so that they act promptly upon the information provided by the system and have a full understanding of the uncertainties.
- A *post mortem* exercise should also be systematically undertaken after all major crises and shocks at national and regional levels, in order to improve the policy response and preparedness.

Table 1. Predicting different types of migration : tools and timeframes

	Short term / next week or month	Medium term / next year	Long term/ next decade
Forced & irregular migration	Early warning & alert systems Medium to high predictability	Modelling & Risk analysis Low to medium predictability	Foresight Very low predictability
Labour & Free movement	Administrative & LFS data Medium to high predictability	Modelling & programming Medium predictability	Foresight Low to medium predictability
Family	Administrative data High predictability	Programming Medium to high predictability	Foresight Low to medium predictability

Introduction

International migration flows are volatile and difficult to anticipate but some types of movements are more stable or more regulated than others, hence more predictable. The most difficult part of migration flows to anticipate is certainly related to forced and irregular movement. This is, however, where there is the greatest need for contingency planning and/or to quickly adapt asylum and reception services. Labour and family migration, including within free mobility areas, are theoretically easier to foresee, although it requires a sharp understanding of push and pull factors as well as of individual behaviour. Anticipating these flows is particularly useful to support integration service providers at national and local levels.

Overall, the predictability of migration depends on the **quality** of the underlying data available, on the **complexity** of key drivers, as well as on the **timeframe** considered. Table 1 presents the different sets of tools and levels of predictability for migration movements by type and time horizon.

For each category of tools developed by OECD and EU countries to improve preparedness for future migration, prevailing approaches vary in terms of implementation.

Early warning and alert systems

One approach to improving preparedness to migration consists in setting up systems for early warning. The logic of these lies of monitoring information as close as possible to relevant events in order to produce warnings of looming displacements. Some approaches rely mostly on quantitative data, while others are largely based on qualitative information. Some are highly standardised and fully replicable, whereas others rely more on the vision, knowledge and skills of single analysts or teams, and therefore can hardly

be replicated outside of the context in which they are used.

Early warning and alert systems can be designed to monitor forced displacements in real-time, or to monitor (potential or actual) changes in push factors. The more early warning systems move away from monitoring actual flows to focus on their drivers, the more they approach pure short-term risk analysis. In other words, rather than estimating migration before it crosses the border, early warning estimates the *likelihood* of migration before people even start to move – or maybe even before they start thinking of packing their bags.

An example of a monitoring system with some early warning functions is the EU Integrated Political Crisis Response (IPCR) arrangement. Designed to support the Council of the EU in dealing with disasters or acts of terrorism, the IPCR was activated in information-sharing mode for the first time in October 2015 during the ‘migration crisis’. The ICPR combines an informal round table bringing together relevant EU actors and experts, regular analytical reporting (and notably the Integrated Situational Awareness and Analysis – ISAA – report), web platforms for gathering and sharing information, a 24/7 contact point for monitoring, alerting, and liaising with other actors.

Another example of monitoring system is the [Displacement Tracking Matrix System \(DTM\)](#) developed by IOM. The DTM project, created in 2004, now covers almost 70 countries. It is comprised of people located on the ground at critical points on specific migration routes in transit countries to derive quantitative estimates of the flow and/or presence of a specific population category. The system has been very effective in providing information in some contexts (e.g. Iraq) but struggled in others (e.g. Yemen). The DTM faces methodological challenges and may have a hard time, in some contexts, capturing new emerging

routes (notably outside of cities) and rapid changes in how smuggling networks.

At national level, many OECD countries have put in place internal systems (e.g. the monthly migration barometer of the Federal Police in Belgium, the Norwegian quarterly assessment of migration trends, or Switzerland's establishment of a situation room and a national migration analysis centre - *Réseau d'Analyse Migratoire*). The information exchange system set up by EASO in the framework of its [Early warning and Preparedness System](#), including monthly reports (some public, some limited) and analyses, are also playing an important role and actively contribute to information sharing.

In the context of early warning monitoring systems, satellite imagery can be a relevant source of information. It enables to identify changes of concentration of highly mobile people in real time or count and localise cars or boats on the move. However, this source of information is less relevant in highly urbanised environments and requires detailed *ex ante* intelligence on precise migration routes.

Surveys in countries of origin could also be used to monitor directly the evolution of migration intentions. The annual [Gallup World Poll Survey](#), which covers about 160 countries worldwide and includes questions on migration intention and preparedness, could be particularly relevant in this context. Weighted Gallup World Poll Survey numbers appear massive: in 2015, more than 700 million persons (age 15 and over) express a desire to migrate in the next 12 months. Only 23 million adults, though, reported taking specific steps to do so. Looking more closely at 2014-16 data shows however that the survey is not necessarily a robust predictor of observed movements, at least as far as asylum is concerned (see Box 1). Running such surveys in a crisis country is particularly challenging; further, the decision to flee is not planned but may result from sudden changes in perceived risks and fear, hard to capture for the survey. Sample sizes are also generally too small to be able to analyse specific potential target groups at a great level of details. Surveys carried out in countries of destination, in turn, may provide useful information on the migration experience – including push/pull factors, routes, and network effects – as well as on the situation and risks in countries of origin and

transit. Reviews and feasibility assessments for surveys of asylum seekers are ongoing at EASO.

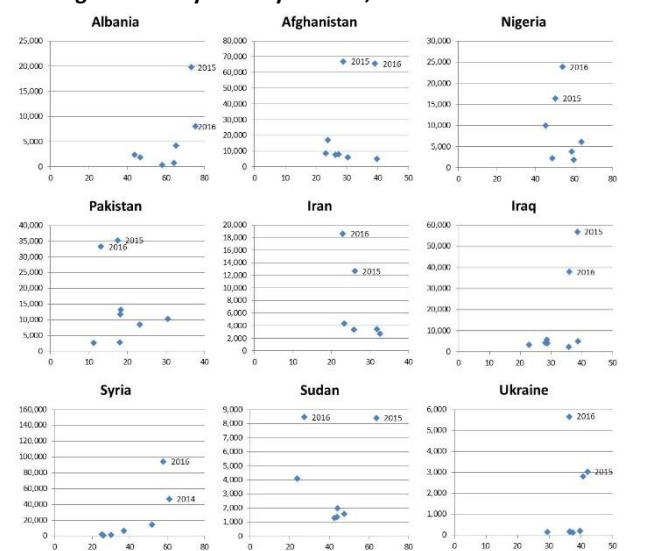
Box 1: Can survey data be used to predict forced migration surges?

Recorded asylum applications show little correlation with emigration intentions or plans to do so within the next 12 months, as recorded by the Gallup World Poll one year before. Figure 1 presents the results based on migration intentions for males aged 18-34 born in 8 selected origin countries (Albania, Sudan, Nigeria, Afghanistan, Iran, Pakistan, Iraq, Syria and Ukraine) for which a sudden jump in asylum applications in EU countries was observed in the period 2014-2016.

In recent years, however, unusually high numbers of asylum applications from Albania, Afghanistan, Iraq, Syria and Sudan were associated with high emigration intentions a year before.

Nonetheless, it seems hard to draw solid conclusions on that basis as a) in other years, roughly similar emigration intentions or plans were associated with relatively high or low asylum applications, and b) even if unusually high flows would have been predicted based on changes in intentions or plans, the *magnitude* of the jump in applications appears unpredictable – peak applications (for 2015 and 2016) were almost all outliers, with no empirical relationship to intentions that would allow forecasting them.

Figure 1. First asylum applications in the EU (y axis) vs intentions to emigrate in the previous year (percent, x axis), men aged 18-34 by country of birth, 2009-2016



Source: OECD calculations based on the Gallup World Poll Survey 2008-2015 and on Eurostat data on asylum seekers 2009-2016.

In view of their diversity, flexibility and relation with risk analysis, variants of early warning systems are adopted or planned to be adopted by some

actors at national, EU or international levels. In addition to 'standard' early warning systems attention is increasingly being paid the potential of big data, notably to analysis of changes in push factors in real time. "Big data" are best defined by their characteristics (the three v – high volume, velocity, and variety) than by their content.

Examples of big data potentially relevant to early warning of forced migration movements include communication based information sources such as social media, internet searches, smartphone apps, the IP addresses of website logins and emails, and call detail records. Interestingly, since some such data sources can be 'geolocated', they have even greater potential for early warning and monitoring of migration movements. The use of private data in this context raises, however, some privacy and confidentiality concerns.

The [Gdelt project](#) is a remarkable example. Gdelt based on open data sources monitors the world's news in over 100 languages and identifies a large variety of events, locations, organizations, people, images, and so forth. Data are updated every fifteen minutes; they are freely accessible and they can be easily visualised and exported. Gdelt's massive high-resolution coverage offers visibility into global trends and emerging social, political and economic risks worldwide. In the same vein, the Massive Data Institute Research and the Institute for the Study of International Migration of Georgetown University have developed a prototype for data intensive early warning systems to detect forced migration emergencies from conflict and natural disasters like earthquakes and hurricanes. (Collman et al. 2016).

Search term frequency is another potential indicator. Google Analytics makes data on search queries publicly available. This provides the number of times a particular search term (such as the name of a destination country) in a particular language was used in a given month, and from which country the query was made. The value of these data in forecasting migration flows has been investigated by Böhme et al. (2017) and Connor (2017). Both studies conclude that search query data can be useful for forecasts under certain conditions, although sufficient variation in the existing time series is required in order to be of use for prediction. EASO is currently testing a system combining a variety of big data sources for early

warning and short-term forecasting of asylum applications in EU+ countries.

Researchers have also developed predictive models based on local weather conditions to estimate the short-term evolution of illegal border crossings and their localisation. For example, analyses can be based on the size of waves and wind conditions in the Mediterranean Sea to predict landings. In the same vein, certain countries are using specific indicators of vulnerability/risk in countries of origin to monitor emerging risks of large scale forced displacements (e.g. Acute Food Insecurity Index, violence indicators).

The key challenges associated with early warning based on short-term risk analysis relate not only to the selection of relevant data sources but also to the selection of the potential drivers to be monitored and to the warning thresholds to be set. Trigger points are particularly challenging to identify and monitor, notably because they have usually more to do with the perception of risk by potential migrants rather than with any specific observation.

While a good overview of the push and pull factors of migrations (EASO 2016) helps improving the coverage of relevant drivers, setting appropriate thresholds for triggering early warning is crucial to minimise the two key risks of ignoring relevant signals (false negatives) or overstating irrelevant signals (false positives). Rather than a purely technical issue, setting the right thresholds is a strategic decision in which analysts or decision-maker need to address the trade-off between triggering false alarms for events that do not happen against not providing warnings of events that eventually happen.

Moreover, early warning and alert systems are generally not well suited to estimate the scope of potential migration surges, the likelihood of secondary migration and, unless migration takes place in very specific corridors, the final destination of migrants on the move. As migrants themselves constantly adapt their strategies according to changing conditions in transit and in potential destination countries, it is important to complement early warning and alert systems with real-time analyses of diaspora and social networks.

Modelling

In a medium term perspective, countries have developed a wide range of tools that go from risk analysis to modelling and programming. Different forms of tools correspond to different migration contexts but also to the quality and level of information available.

Medium term risk analysis is widely used in the EU to identify and select weak signals (e.g. emergence of new migration routes or changes in the *modus operandi* of smuggling networks) that are then used to adapt and fine tune early warning systems. EASO for example outsourced the provision of monthly reports on selected countries of origin, reviewing relevant factors and drivers of forced migration and including some risk analysis elements such as an outlook of possible developments. In parallel [Frontex](#) has a Risk Analysis Unit that, also based on information shared by Member States, produces a range of reports more focused on illegal migration. In Europe, [Gdisc](#) has also set up a working group on prognosis that facilitates information sharing on upcoming asylum trends and prognosis systems between member countries.

Modelling is increasingly used to forecast forced migration movements and asylum applications. Forecasts can rely on different information sources and data and they can follow very different approaches (see EASO 2017 for a review). Yet, they all tend to share three key elements:

- They are based on some underlying theory on the processes and drivers
- They analyse data on drivers and migration flows
- They combine and analyse these data using certain models

All these elements incorporate a number of theoretical, empirical and technical challenges.

Fragmented theories. The portfolio of theories available for making sense of how push and pull factors combine to determine migration is quite rich. There is generalised agreement on the relevance of some key factors, such as conflicts, violence, insecurity, political instability, socio-economic crises, or human rights abuses. However, there is no consensus on a range of additional factors, such as demographics, cultural and historical proximity, environment and climate change or policy pull factors. There is also a limited understanding of how exactly these factors

combine, and whether there are certain break points that trigger larger flows (see above) and how they interact with migrant networks. Moreover, psychological elements are largely excluded from current models as emphasised in research carried out at the IGC (Kok, 2016).

Furthermore, theoretical frameworks say very little about where forcedly displaced people move to. Most tend to stay close to their region or country of origin, while some undertake secondary or long-distance movements. The theoretical frameworks available to model these choices - or more generally choices of specific destination countries - for applying for asylum face a number of challenges and limitations¹.

Data and measurement issues. Recent decades marked great advances in collecting migration data. However, a number of issues still have to be addressed to obtain a better picture of migration, and they have to do with concepts and definitions, as well as with collection mechanisms. In order to be useful for migration forecasting, data should ideally add high-frequency and timeliness to accuracy and coverage.

What is more, data should be available and updated for all relevant countries of, countries of first asylum and countries of transit. Data should also be disaggregated by region and incorporate information relevant to identify specific population groups within countries of origin most at risk of forced displacement.

Modelling challenges. Although formal models are limited compared to migration theories, some models have been developed to systematically analyse migration – including simple regression, panel regression, time series, structural and log-linear models. A distinction can also be made between explanatory and predictive models. Some (Bayesian) models are also using expert-based information notably to introduce qualitative information on risks.

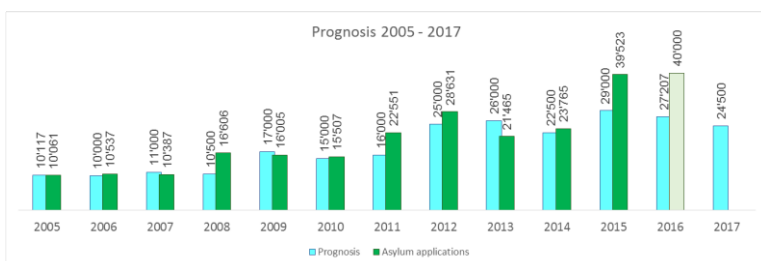
Although predictive models combining data on migration drivers to develop migration forecasts are relatively limited, particularly in the area of

¹ See notably Hatton (2004), Hatton and Moloney (2015) and Senne (2018 forthcoming) for empirical analyses of the determinants of destination choices of asylum seekers including network effects, employment conditions, access to the welfare system and recognition rates.

forced migration, some such models are used at the national and international levels. For example, Germany forecasts entries up to one year ahead, Ireland conducts informal forecasting based on updated extrapolations, the Netherlands has a monthly rolling forecast for asylum applications, Norway has quarterly forecasts and the United Kingdom an annual forecast by nationality. Particularly interesting are the examples of the Swedish and Swiss models, which rely on very different data, tools, and approaches.

The Swiss model. The State Secretariat for Migration (SEM) has for more than a decade conducted prognoses of the likely number of asylum applicants to Switzerland. The SEM system is thus one of the longest-established in Europe. Although the system combines qualitative information with quantitative data, it is not primarily based on formal statistical methods. Expert input is instead at the core of the system. Experts, particularly country of origin information officers, inform projections about future migration. Expert projections are complemented with a very wide range of sources, including information on changes in the political, economic and social situation at the origin and in main transit and destination countries, observed changes in the migration routes towards Europe and changes in asylum practices in Switzerland as well as in other European countries which are potential alternative destinations. Finally, experts are also key to the way the range of information sources used is combined to produce forecasts. The SEM system has proven largely reliable, although forecasts were upturned by unexpected or particular events, in 2011/12 in the context of the Arab Spring and in 2015/16 (Figure 1).

Figure 1 The Swiss prognosis model, 2005-2017



The Swedish model. In addition to a consolidated system combining quantitative and qualitative information to make prognoses based on risk analyses and early warning, the Swedish Migration Agency (SMA) recently engaged in the development of a sophisticated, highly formalised model based

on 'migration algorithms'. The project is meant to address the need for short-term (from one-day to six-month) forecasts, thus complementing prognoses that cover a longer term. The core of the Swedish model is based on a Holt-Winters model (with seasonality), which is constantly updated, and combined with a ranges of models (time series, exponential smoothing, and machine learning techniques that generate multiple predictive functions and select the best one). Interestingly, the migration algorithms project makes a step farther to also include additional models for 'throughflows' (the processing of asylum applications, based on queuing theories and probabilistic models) and for 'outflows' (the distribution of beneficiaries of asylum in the Swedish territory, based on mathematical models). The Swedish model has been tested against historical data yielding promising results, although forecasts need to be adjusted several times a year to remain accurate notably in the context of major shocks². This is therefore a resource intensive process.

A key question is of course to what extent the model can be exported and applied to other contexts. While in principle the high degree of formalisation of the model makes exporting it relatively easy, one important constraint has to do with the information sources available. An important element of the Swiss model is information on arrivals or asylum applications in EU countries closer to the external border. For example, migration and asylum applications in Switzerland are highly correlated to arrivals and applications in Italy. This is also the case of migration to Sweden, which can be modelled also as a function of migration to other European countries. This crucial information is obviously more difficult to collect for countries located on the external border of the EU, such as Italy or Greece, or when one wants to develop forecasts at the EU level.

In sum, a key problem for forecasts lies in the timeliness of the data available. Indeed, even if we had a perfect theory of migration push and pull factors, the perfect data on migration and its drivers, and the perfect model for analysing those data, in order to produce highly precise forecasts

² The estimates for 2015 asylum figures in Sweden were reviewed several times throughout the year and were finally about threefold what was initially planned.

we would still need data on the *future* configuration of migration drivers. For example, even if we were able to accurately model the migration-generating effect of conflicts, in order to derive forecasts on that basis we would need to have data about future conflicts – and this would apply to all drivers.

One possible way for addressing uncertainty about the future is to rely on expert knowledge. When asked to provide estimates about the future of migration from certain countries, experts implicitly reflect on potential future configurations of push and pull factors, and on how they could interact and combine to determine migration. Bayesian models are particularly suited to add expert-based information to standard models in the form of ‘prior distributions’ (Bijak, 2010). In recent years, such approach has notably been adopted by the UN to look at long term migration and population projections (Azose and Raftery 2015). In a workshop with Member States, EASO also tested possible applications of Bayesian modelling to reduce uncertainties in forecasts.

Modelling has also been used by statistical agencies to forecast overall migration flows to support demographic projections in a handful of countries (e.g. Canada, the Netherlands, New Zealand). In the European context, modelling has also been used to anticipate intra EU movements in the context of asymmetric economic shocks or enlargement. Regarding the latter, attempts to estimate the impact of the 2004 enlargement on migration flows to EU-15 countries (see for example Dustmann and al. 2003 and Alvarez-Plata and al. 2003), which largely underestimated the actual flows, have clearly illustrated the difficulties to anticipate migration movements even in the context of predictable events and the need to take into account the non-stationarity of migration time series in such models.

There is a wide range of technical challenges associated with producing forecasts for migration, and particularly for forced migration. In addition to those challenges, analysts and policy-makers working on forecasts need to address the reputational risks associated to delivering forecasts that eventually prove inaccurate. This requires a full transparency on margin of errors and on the limitations of underlying models.

Programming

Programming is by nature only relevant for selected migration categories or in destination countries which have target levels or numerical limits and adjust them at least on an annual basis. Australia, Canada and New Zealand fall into that category as they have annual immigration level plans for all categories of permanent migrants. This includes notably family migration. Although family migration is partly based on past movements, the capacity to anticipate how many people will reunite in a given year and how many family members people will bring requires precise understanding of the decision making process of principal applicants and families. Immigration, Refugees and Citizenship Canada (IRCC), for example predicts future intakes based on econometric modelling that uses historical data and current trends.

Most other OECD countries do “back of the envelope” calculations, based on past trends and extrapolations, to gain a sense of how many short and long-term permits might be requested in various consulates and ports of entry, generally with a view to assign human resources accordingly. In this context, making the link with future needs for settlement and integration services is the exception rather than the norm. Local authorities in particular rarely have visibility on how many legal migrants may settle in their jurisdiction in the coming year.

UNHCR, as the leading international organisation to support refugees and other people in need of protection, projects resettlement needs annually (UNHCR 2018). The estimates depend on the quality of available data. The estimated needs for resettlement are primarily based on UNHCR registrations but they also build on community-based approaches, participatory assessments, and the [Heightened Risk Identification Tool](#) (for more information on the methodology see UNHCR 2018, page 53).

Foresight and long-term forecasting

Taking a long term perspective on migration trends raises a different set of challenges but also aims at supporting policy development in a different manner. The state of the art in long term anticipation of migration movements attempts to embrace predictive uncertainty through two main approaches. Presenting migration forecasts in a stochastic fashion is a first way to stress that

uncertainty matters. In this approach, future long-term forecasts are presented as prediction distributions whereby future migration trends are forecast within probability intervals. The width of these intervals is however generally extremely large for long term projections and inversely proportional to the value added for policy makers. The public at large may also have difficulty interpreting such intervals, focusing on the doubt or the extremes.

The second approach, instead, builds on foresight techniques. Foresight can take various forms such as horizon scanning (identifying emerging issues and possible impacts on trends), trends analysis (analysing factors of changes), scenarios building (testing alternative possible futures) or visions and roadmaps (identifying desired future and associated policy agendas). Foresight exercises are most useful in very specific contexts such as when critical functions change, when decisions entail deep or long-term engagement and investments or when innovation needs to be fostered.

The most common approach to foresight in the migration field seems to be related to scenario building. Recently, specific exercises were carried out for example by Frontex in the field of [border management](#) for the next five to ten years, by the Joint Research Consortium on [the future migration in Europe](#) by 2030, by ACAPS regarding possible developments in migration via [Turkey and Greece](#) or via [Libya and Italy](#) via for the next six months, by IOM on the [Future of World Migration](#) by 2030, by Oxford IMI DEMIG on [Global Migration Futures](#) for selected regions, as well as by the [OECD](#) in 2009 or more recently by the [Development Centre of the OECD](#) among others³. EASO is also preparing a scenario analysis exercise specifically focused on the future of asylum-related migration to Europe. While these projects are generally praised by those involved, it is fair to say that the implications for policy making are not always obvious notably when the time horizon is set far away (beyond 10/15 years), scenarios are rudimentary (e.g. more or less restrictive migration policies; more or less international cooperation; more or less convergence) and migration categories unspecified.

Exercises based on horizon scanning and visions are potentially useful as exercises to build consensus

³ Few OECD countries also reported having used recently scenario building exercises (e.g. Canada for highly skilled migration; the United Kingdom [on climate change](#)).

on long-term challenges and objectives. They can help to test whether current policies are future proof, strengthen the adaptability of current policies to forthcoming changes or agree on a roadmap for reaching a common goal. The success of these approaches is, however, grounded in the possibility of bringing together a large and diverse group of relevant stakeholders who are in a position to implement concrete policy changes.

Equally important is the possibility for all relevant stakeholders to undertake a *post mortem* exercise after every major crisis or shock, looking back at what worked well and what did not and to investigate how policy responses and coordination can be improved in the context of similar events going forward.

Conclusion

Improving preparedness for changes in migration flows, notably as a result of humanitarian crises, requires building on a variety of tools and approaches. No general approach fits the needs of different categories of migration and all timeframes.

In this context, there is a clear need to reinforce international co-operation, not only for sharing intelligence but also for sharing information on the situation of migrants along main migration routes and for sharing resources for the development of complex analytical tools. In Europe what has already been achieved by EASO and other EU agencies (e.g. Frontex, IPCR, Eurodac, Eurojust) should not be underestimated but needs to be maintained beyond crisis episodes.

Challenges in terms of preparedness may however go beyond immediate responses and reception. More could be done to better anticipate medium-term needs notably in terms of integration and to share that information with all relevant stakeholders for programming purposes, notably at local level. For example, how many asylum seekers are expected to come out of the asylum process in the next couple of months? What are their profiles? Etc. The same applies regarding return and re-integration policies.

And even when prognosis has been made in timely and accurate way, there is still the issue of how best to communicate available information to the political leadership so that actions are undertaken in due time to adapt contingency planning,

resources and policies; but also so that policy makers understand the uncertainties and risks associated to forecasts.

For example, in the context of civil wars in Libya and Syria as well as instability in Iraq, the 2014 UNHCR Global trends report, Antonio Guterres (UN High Commissioner for Refugees), declared *“We are witnessing a paradigm change, an unchecked slide into an era in which the scale of global forced displacement as well as the response required is now clearly dwarfing anything seen before.”* There were no doubts that a major crisis was coming up and that Europe would be affected. Yet, the heads were turned towards other immediate challenges notably in Greece and in Ukraine.

One key lesson learnt from the 2015/16 refugee surge in Europe is although the information systems may be in place, given the inevitable remaining uncertainties there is no guarantee that policy makers will act upon it in a timely manner, especially if political or financial costs are involved.

This can only be achieved with an appropriate institutional setting that allows for feedback loop between policies and research, with a full transparency on the level of uncertainty in the information provided and with a longstanding trust relationship between all stakeholders involved.

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