

NORTH MACEDONIA MICS 2027 DATA GAP ASSESSMENT

ANALYTICAL REPORT

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Authors: Tamerlan Rajabov rajabov@gmail.com
Ljupka Sakaliska ljupka.tasevska@gmail.com

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Abbreviations

ANC	– Antenatal Care
ARI	– Acute Respiratory Infection
DGA	– Data Gap Assessment
DIA	– Diarrhoea
FGM	– Female Genital Mutilation
HPV	– Human papillomavirus
HQ	– Headquarters UNICEF
ICT	– Information and Communication Technology
LNOB	– Leave No One Behind
MICS	– Multiple Indicator Cluster Survey
MICS7	– Seventh round of the Multiple Indicator Cluster Survey
RH	– Reproductive Health
RO	– UNICEF Regional Office
SDG	– Sustainable Development Goal
SSO	– State Statistical Office of the Republic of North Macedonia
UN	– United Nations
UNICEF	– United Nations Children’s Fund
VAW	– Violence Against Women
WASH	– Water, Sanitation and Hygiene

Executive Summary

This analytical report presents the results of the North Macedonia Multiple Indicator Cluster Survey (MICS) 2027 Data Gap Assessment (DGA). The assessment asks a simple question: which MICS modules will add the most value to North Macedonia's data landscape, given what is already known and what decision-makers need to know by 2030? The answer is based on a structured scoring of each module across four dimensions – Relevance, Recency, Disaggregation Gap and Effort – a composite score that weighs information needs against implementation burden.

The DGA is guided by the decision principle of evidence-based recommendations. What is measured is more likely to get addressed; reliable indicators provide a solid basis for policy choices, resource allocation and accountability. The State Statistical Office of the Republic of North Macedonia (SSO) leads the process, UNICEF serves as technical advisor, and independent consultants support the methodology and analysis. Together, they ensure that results are nationally owned, technically sound and transparent.

The assessment shows that most candidate modules are highly relevant for North Macedonia's policy priorities, but some areas remain under-served. Data gaps are particularly evident for some vulnerable groups – for example children with disabilities, Roma communities, households in the poorest quintiles, and women at risk of violence.

Disaggregation gaps indicate that existing data sources only partially reflect the 'leave no one behind' (LNOB) principle, particularly for some vulnerable groups. For many topics, recent statistics either do not exist or cannot be disaggregated by disability, ethnicity, wealth or region. MICS 2027 is therefore critical to make these groups visible in official statistics. At the same time, Effort Scores remind us that the survey cannot do everything. Some of the highest-need modules – such as Violence Against Women or Foundational Learning – are also among the most complex and resource-intensive.

The table below provides an illustrative summary of how the DGA classifies MICS7 modules into three advisory groups: those recommended for inclusion, those proposed for conditional inclusion subject to resources and strategic priorities, and those not recommended for MICS 2027. The final module package will be decided by the MICS Technical Committee.

Summary of Recommended MICS7 Modules for North Macedonia, 2027 after the validation workshop

Modules recommended for inclusion	Modules for conditional inclusion / discussion	Modules not recommended for MICS 2027 (can be revisited)
List of household members (b)	Fertility / Birth history (b)	Anthropometry – 5–9 years (c)
Household characteristics (b)	Breastfeeding and dietary intake (IYCF) [0–2] (c)	Time-use [10–17] (c)
Under-five's background (b)	Contraception (c)	Adult functioning [18–49] (c)
Education: Attainment [3+] (b)	Unmet need for family planning (c)	Employment and training [15–24] (c)
Education: Attendance [3–24] (b)	Decision-making on reproductive health (c)	Household energy use (c)
Early childhood development (b)	HPV immunisation (c)	
Child discipline [1–14] (b)	Post-emergency (c)	
Child labour (b)	Early childhood education attendance (b)	
Water (drinking water) (b)	Social transfers (c)	
Sanitation (b)	Discrimination (c)	
Hygiene / handwashing facility (b)	Birth registration (c)	
Antenatal care (b)		
Delivery care (b)		
Anthropometric measurements – under 5 (b)		
Marriage / Union (b)		
ICT access and use (b)		
Children with functional difficulties (b)		
Multidimensional poverty (c)		
Food insecurity experience (c)		
Health insurance (c)		
Attitudes toward domestic violence (c)		
Menstrual health and hygiene (c)		
Care-seeking for children with ARI symptoms (c)		
Care-seeking and treatment for diarrhoea (c)		
Tobacco use (c)		
Safety (c)		
Foundational learning skills [7–14] (b)		
Water quality testing (b)		
Migration (c)		
Violence against women (c)		
Immunisation [0–2] (b)		
Mental health of adolescents & youth [15–24] (c)		
Maternal mortality (c)		
Household Involvement in Education (c)		

(b) = MICS7 base modules; (c) = MICS7 complementary modules.

Following the validation workshop held on December 17, 2025, stakeholders reviewed the DGA recommendations and made strategic adjustments to the module package. Eight modules initially classified as 'conditional' or 'not recommended' were elevated to 'recommended for inclusion' based on critical policy priorities and stakeholder consensus:

- **Foundational learning skills [7–14]** and **Household Involvement in Education** were prioritized to strengthen education monitoring aligned with the National Education Strategy 2026-2032.
- **Violence against women** and **Mental health of adolescents & youth [15–24]** were deemed essential for the Gender Equality Strategy 2021-2026 and Istanbul Convention obligations, despite high implementation effort.
- **Immunisation [0–2]** and **Maternal mortality** were included to ensure comprehensive health monitoring despite the availability of some administrative data.
- **Water quality testing** was prioritized following partner commitments to support laboratory logistics.
- **Migration** was added to capture emerging demographic patterns relevant to the National Development Strategy 2024-2044.

These strategic inclusions reflect North Macedonia's commitment to comprehensive equity monitoring and closing identified data gaps, acknowledging the increased survey complexity and resource requirements.

Each module's scores on Relevance, Recency, Disaggregation Gaps and Effort are combined into a composite priority score. This score classifies modules into three advisory groups mentioned above: recommended for inclusion, conditional inclusion and not recommended for MICS 2027. Details of the scoring approach are provided in Section 2 (Methods). Most MICS base modules fall into the Include category. A small number of base modules – such as Birth History (full fertility history) and Water Quality Testing – are flagged for discussion because their incremental information value may be lower relative to effort in the North Macedonia context. Several complementary modules addressing LNOB and emerging issues (child disability, food insecurity, menstrual hygiene, social transfers, learning, discrimination, mental health) achieve high or borderline priority and are proposed as either Include or Conditional include, depending on feasibility.

On this basis, the report proposes three defensible advisory options for the Government and partners:

- *Option A* – Equity-maximising set (LNOB priority): a broad package that includes base modules plus equity-critical complementary modules (disability, VAW, social transfers, discrimination, mental health, etc.).
- *Option B* – Strategic impact set: a balanced package that covers all major sectors and SDG priorities (health, nutrition, education, WASH, social protection, gender) while trimming the heaviest or least strategic modules.
- *Option C* – Lean feasibility set: a streamlined package focusing on base indicators and a very small number of complementary modules that address the most pressing gaps, keeping interview length and complexity low.

All three options are evidence-based. They differ not in logic, but in ambition and resource implication. The SSO, line ministries and UN partners are invited to select or adapt an option, documenting any departures from the priority list. Whatever option is chosen, the DGA ensures that MICS 2027 will be a deliberate, not accidental, survey – one that generates the right data for the right decisions, while respecting respondent time and national implementation capacity.

This Data Gap Assessment is a technical advisory tool, not a decision instrument in itself. The composite scores and advisory options are designed to support, not replace, the judgement of the State Statistical Office, line ministries and UN partners. Final decisions on the MICS7 module package will be taken by the MICS Technical Committee, taking into account operational feasibility, budget and strategic priorities.

1. Purpose, Scope and Governance

1.1 Purpose

The purpose of the Data Gap Assessment is to guide decisions on the content of North Macedonia MICS 2027. Rather than starting from a generic global template, the DGA asks which modules are most relevant to the country's policy agenda, where information gaps are largest, and what can realistically be implemented by the SSO. The assessment therefore focuses on 'what to measure' – not on sampling, fieldwork logistics or budgeting – and provides an analytical basis for module inclusion, conditional inclusion or deferral.

1.2 Scope

The DGA reviews all MICS7 base and complementary modules that are potentially relevant to North Macedonia. This includes household, women, men, children and under-five questionnaires, and covers topics such as fertility, mortality, health, nutrition, education, child protection, social protection, disability, ICT, time use, discrimination and safety. Modules that are not applicable in the North Macedonia context (for example, malaria-related content or FGM) are screened out early by stakeholders during the two-day workshop. For all other modules, scores are derived from the DGA matrix and supporting evidence collected from stakeholders, desk review and interviews.

In this report, 'base modules' refers to the standard MICS7 base content that is normally included in all surveys, while 'complementary modules' are thematic modules that countries may add based on their priorities.

1.3 Decision principle

The central principle is evidence-based recommendations. Module decisions are not driven by individual preferences or 'what we have always done', but by four explicit criteria: policy relevance, recency of alternative data sources, the extent to which existing data enable LNOB-sensitive disaggregation, and the effort required to implement each module within MICS 2027. Where the evidence is ambiguous or borderline, the report makes this transparent and proposes conditional rather than categorical recommendations.

1.4 Governance roles

The DGA is led by the State Statistical Office (SSO), which owns the process and the final decisions. UNICEF North Macedonia plays an advisory role, ensuring alignment with MICS7 global standards, SDG indicator frameworks and child-rights perspectives. Independent consultants provide methodological support, maintain internal consistency of scoring, and act as neutral brokers in synthesising government and UN perspectives. This governance arrangement promotes country ownership while leveraging international expertise.

1.5 Intended users & uses

The DGA results are intended primarily for national decision-makers – SSO management, line ministries and national coordination bodies – and for UN agencies that depend on household survey data. The report is also a tool for resource mobilisation, as it clearly shows where additional modules (for example, on violence or learning) would require incremental financing, training or technical support.

The DGA therefore provides an evidence-based starting point for decisions, rather than a fixed module blueprint. It offers transparent recommendations that national stakeholders can accept, adapt or depart from, provided that any changes are documented and explained.

2. Methods

The assessment uses a simple but rigorous scoring framework built around four dimensions – Relevance, Recency, Disaggregation Gap and Effort – combined into a composite score for each module.

A separate **Module Prioritization Report** provides module-by-module score profiles and detailed justifications; the present analytical report summarises the main patterns and advisory options for decision-makers.

2.1 Relevance

Relevance captures how important a module's indicators are for current policies, strategies and international commitments. Scores are based on three inputs:

- (i) ratings from line ministries and national institutions,
- (ii) ratings from UN agencies, and
- (iii) an independent desk review of national laws, strategies and programmes.

Each group rates indicators on a three-point scale (1 = low, 3 = medium, 5 = high). Group averages are then combined with equal weights (one-third each) to produce an indicator-level relevance score, which is in turn averaged across indicators to obtain a module-level score.

In practice, high relevance scores are observed for modules that:

- (a) align with explicit national strategies or SDG targets;
- (b) support flagship programmes (for example, early childhood development, social protection, child protection, Roma inclusion); or
- (c) provide data required for international reporting. Low scores are assigned to modules that are clearly outside the policy agenda or not applicable to North Macedonia, such as malaria-related content.

Relevance does not consider data gaps or feasibility – those are captured in other dimensions.

2.2 Recency

Recency measures how up-to-date comparable information is from sources other than MICS. For each indicator, the latest available data point is identified from surveys, administrative systems or specialised studies. Indicators are then scored on a three-tier scale where higher values represent larger information gaps. These scores are averaged to obtain a module Recency score.

Modules where no comparable data have been generated since 2010 receive the highest recency scores and are interpreted as critical information gaps. Modules with data last updated before 2022 but after 2010 represent moderate gaps. Modules with recent or regularly updated data (for example, some vital statistics or education enrolment figures) receive the lowest recency scores, signalling that MICS would add limited incremental value in terms of timing, although it might still add value for disaggregation.

2.3 Disaggregation Gap

Disaggregation Gap operationalises the ‘leave no one behind’ (LNOB) lens. It assesses whether existing data can be disaggregated by key equity dimensions: age, sex, education, disability, Roma ethnicity and wealth. For each indicator, we determine whether at least one demographic split (age or sex) and at least one social split (education, disability, Roma or wealth) is feasible in practice. Where both groups of splits are feasible, the disaggregation gap is scored as zero. Where only one group is feasible, a partial gap is recorded; where neither is feasible, the gap is maximal.

An adjustment is applied for missing LNOB anchors: if age or sex is not available, the indicator receives a small additional penalty. Single-sex target indicators (for example, ANC coverage among women) are treated as fulfilling the demographic requirement. Indicator-level gap scores are averaged per module, yielding a DisaggregationGap score between 0 and 3. A higher score means that existing data poorly reflect the circumstances of vulnerable groups, and that including the module in MICS would meaningfully strengthen LNOB-sensitive monitoring.

2.4 Effort Score

Effort reflects the workload, complexity and resource implications of adding a module to MICS. It is based on an Effort Score developed by the global MICS team, which combines 11 drivers: questionnaire length, customisation needs, field logistics, sampling implications, training and supervision requirements, respondent burden and data processing demands, among others.

Original Effort Scores are transformed into an EffortPenalty on a 0–2 scale. The transformation uses inclusive percentile ranks and caps extreme values so that one unusually demanding module does not distort the entire scale. For presentation, EffortPenalty values are grouped into three bands: Low (0.00–0.66), Medium (0.67–1.33) and High (1.34–2.00). These bands are used as ‘effort badges’ in charts and tables, while the underlying continuous value is used in the composite score.

2.5 Matrix Approach and Composite Score

The three information-gap dimensions – Relevance, Recency and DisaggregationGap – are first analysed separately to understand patterns. They are then summed to obtain Total (no Effort) score. EffortPenalty is subtracted from this sum, with $\alpha = 1.0$ (by default, $\alpha = 1.0$ for stronger cost sensitivity $\alpha \approx 1.25$; for gentler impact $\alpha \approx 0.8$), to obtain a composite priority score for each module:

Composite score = Relevance + Recency + DisaggregationGap – 1.0 × EffortPenalty

Scores are interpreted on an approximate 0–13 scale. Near-maximum scores indicate modules that are highly relevant, lack recent alternative data, have large disaggregation gaps and require relatively little effort to implement. Near-minimum scores indicate low-relevance topics with up-to-date, well-disaggregated data and high effort.

3. Findings: Scores and Patterns

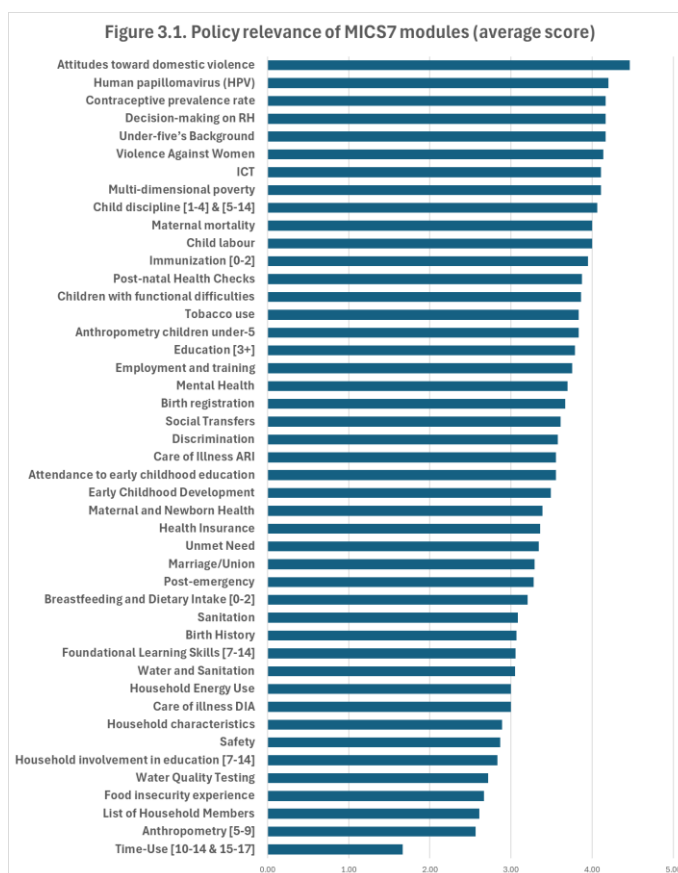
The scoring reveals a clear overall pattern: North Macedonia's information needs for children and women remain broad and, in many areas, acute. A majority of modules fall in the high-relevance range, and most have not been measured for at least five years. Disaggregation gaps are widespread, especially for disability, Roma ethnicity and wealth. At the same time, a non-trivial share of modules are operationally demanding, requiring deliberate choices about where to invest effort.

3.1. Relevance scores

More than half of candidate modules achieve high relevance scores. Figure 3.1 shows that most MICS modules are rated as highly relevant to North Macedonia's current policy agenda. At the very top are Attitudes toward domestic violence, Human papillomavirus (HPV), Contraceptive prevalence rate, Decision-making on reproductive health, Under-five's background, Violence Against Women, ICT and Multi-dimensional poverty. These modules sit close to the maximum relevance score, indicating strong links to national strategies, SDG reporting and ongoing reform agendas in health, gender equality, social inclusion and child protection.

A second tier of modules with similarly high scores includes Child discipline [1-4] & [5-14], Maternal mortality, Child labour, Immunisation [0-2], Post-natal health checks, Children with functional difficulties, Tobacco use, Anthropometry under-5, Education [3+] and Employment and training. These topics are clearly seen by both government and UN stakeholders as central to the country's development priorities and rights commitments.

At the lower end of the chart, Time-use [10-14 & 15-17], Anthropometry [5-9], List of household members, Food insecurity experience, Water quality testing, Household involvement in education [7-14], Safety and Household characteristics receive more moderate relevance scores. These modules are not irrelevant, but they are less tightly connected to explicit strategies or high-level policy debates than those at the top. This pattern confirms that any cuts driven purely by relevance should start from the bottom of the chart, while the top-ranked modules form the natural base of any survey option.



3.2. Recency scores

Very few topics benefit from truly up-to-date alternative data sources. Attendance to early childhood education, basic enrolment rates and some vital statistics have recent administrative data; most other indicators were last measured in 2018–2019 or earlier, and several have never been measured. Modules on violence against women, discrimination, mental health, social transfers, time use, water quality testing and disability stand out as having the largest recency gaps.

Figure 3.2 shows that most candidate modules suffer from serious timeliness gaps. A large cluster at the top of the chart – including Water Quality Testing, Food Insecurity Experience, Post-emergency, Maternal Mortality, Tobacco use, Mental Health, Safety, Multi-dimensional Poverty and Anthropometry [5–9] – has maximum recency scores, meaning comparable data are old or non-existent. These topics are clearly not being monitored through other surveys or routine systems and would gain substantially from inclusion in MICS 2027.

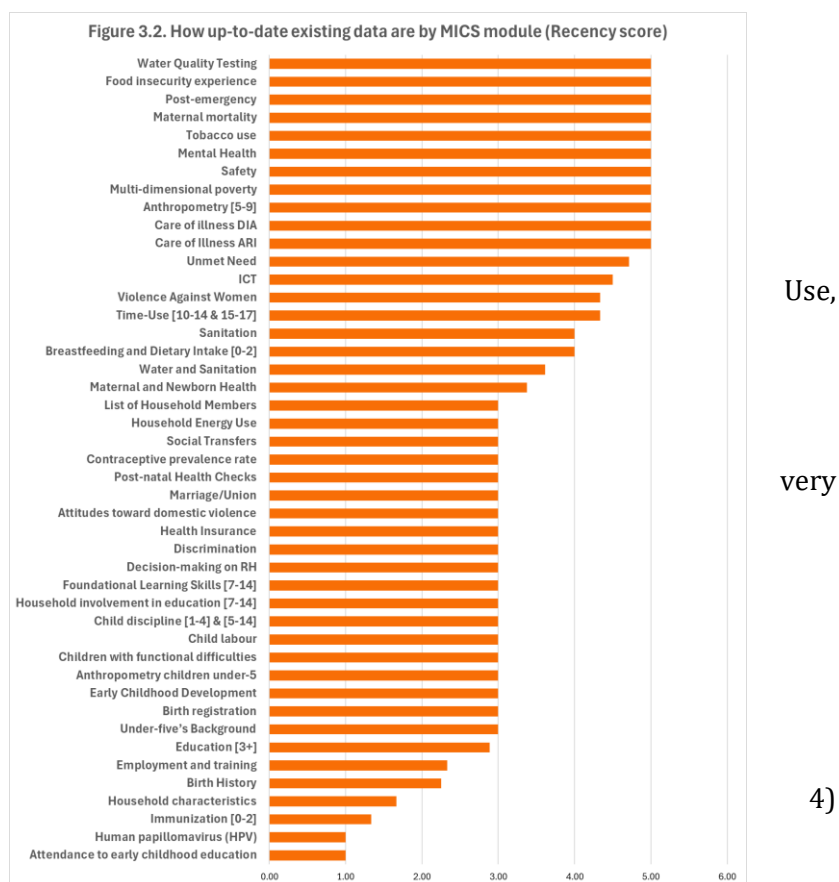
A second group with moderately high scores (around

includes Water and Sanitation, Sanitation, Breastfeeding and Dietary Intake [0–2] and Maternal and Newborn Health. For these, the last data collection is several years old, so updating them in 2027 would still add value, particularly for trend analysis.

At the lower end, modules such as Attendance to Early Childhood Education, Human Papillomavirus (HPV), Immunisation [0–2], Household Characteristics, Birth History and Employment and Training have relatively recent or regularly updated data from other sources. From a timeliness perspective alone, these modules are less urgent and could be considered for deferral if questionnaire space becomes critical.

3.3. Disaggregation gaps

Existing data rarely allow a full LNOB lens. Even where national averages exist, disaggregation by disability, Roma communities and wealth is often missing or incomplete. Modules explicitly designed to capture equity – such as child functioning (disability), discrimination, social transfers and food insecurity – help close this gap. However, even base topics like education and WASH reveal gaps once



equity dimensions are considered: administrative sources do not always support the required level of disaggregation or quality.

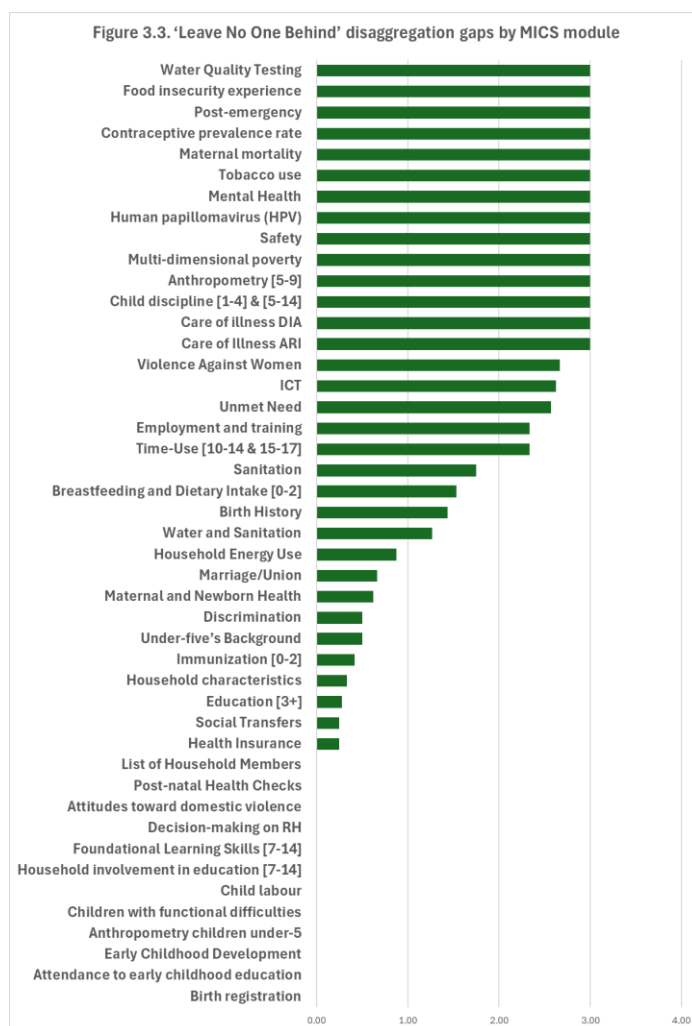
Figure 3.3 highlights where current systems are challenged to reflect vulnerable groups. The highest disaggregation gaps are observed Water Quality Testing, Food Insecurity Experience, Post-emergency, Contraceptive Prevalence Rate, Maternal Mortality, Tobacco Use, Mental Health, Human Papillomavirus (HPV), Safety, Multi-dimensional Poverty and Anthropometry [5–9]. these modules, existing data either cannot be broken down by wealth, disability, Roma ethnicity or other equity dimensions, or can only be partially disaggregated. Including these modules in MICS 2027 would substantially strengthen LNOB monitoring.

Modules such as Child Discipline, of Illness (DIA and ARI), Violence Against Women, ICT, Unmet Need Employment and Training also show sizeable gaps, signalling equity blind spots in child protection, health and labour-market outcomes.

By contrast, Birth Registration, Attendance to Early Childhood Education, Early Childhood Development, Anthropometry under-five, Child Labour and some base health modules have the lowest disaggregation gaps, indicating that current systems already provide reasonably disaggregated information. For these topics the main added value of MICS is trend confirmation rather than new LNOB insights.

3.4. Effort scores

Nineteen modules are classified as High Effort. These include Foundational Learning Skills, Violence Against Women, Social Transfers, Time Use, extended anthropometry for 5–9 year-olds and Maternal Mortality, among others. Several core modules – such as household roster, basic education, standard WASH and child immunisation – are Low or Medium Effort. The presence of both high-need and high-effort modules means that prioritisation cannot be based on need alone; composite scores explicitly reflect this trade-off.



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Figure 3.4. shows that information-modules vary widely in operational burden. At the top, Foundational Learning Skills [7– Birth History and Violence Against Women are the most demanding, followed by Immunisation [0–2], Anthropometry children under- Mental Health, Time-Use, Maternal Mortality and Post-emergency. modules require intensive interviewer training, longer interview times and complex field logistics. Including several of them simultaneously would stretch SSO capacity and lengthen the questionnaire considerably.

Mid-range effort scores are seen modules such as Education [3+], Transfers, Employment and Training, Child Labour, ICT, Contraceptive Prevalence Rate and and Sanitation, signalling a manageable but non-trivial workload.

At the lower end, many short attitudinal or status modules – including Attitudes toward Domestic Violence, Initial Breastfeeding, Malaria-related

where applicable, Decision-making on Reproductive Health, Tobacco Use, Safety, Food Insecurity Experience and Menstrual Health & Hygiene – have low effort scores. These represent “quick wins”: they add important content with limited incremental burden and are strong candidates for inclusion even in a lean survey option.

3.5. Total information-need score

Figure 3.5 ranks modules purely on information need, combining policy relevance, recency gaps and LNOB disaggregation gaps. At the top are Multi-dimensional Poverty, Post-emergency, Mental Health, Care of Illness (ARI), Violence Against Women, Maternal Mortality and Safety, followed closely by Anthropometry [5–9], Tobacco Use, Unmet Need, Water Quality Testing, Care of Illness DIA and Food Insecurity Experience. These modules simultaneously score high on policy priority, have outdated or missing data, and would sharply improve equity-sensitive monitoring.



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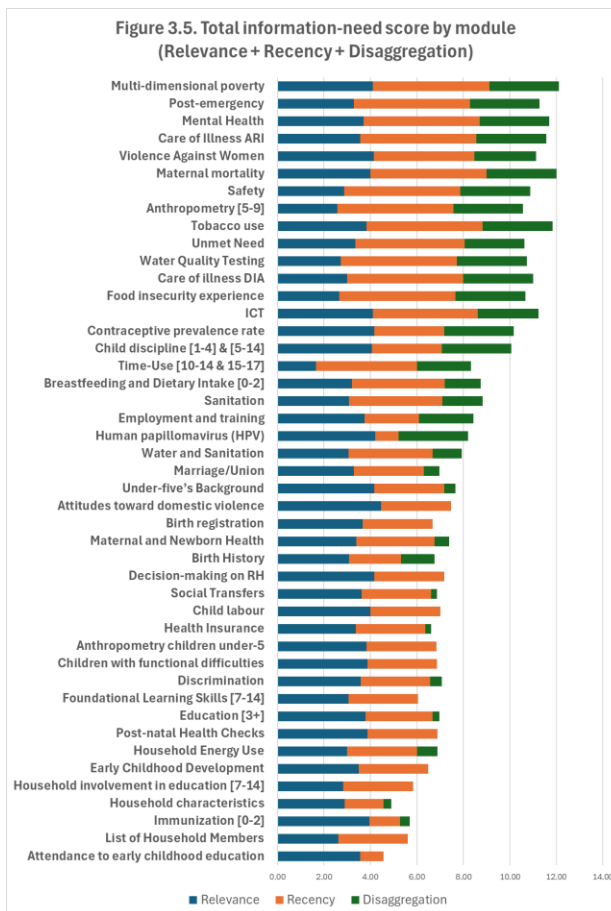
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A second tier of strong performers includes ICT, Contraceptive Prevalence, Child Discipline [1–4 & 5–14], Time-Use, Breastfeeding and Dietary Intake [0–2], Sanitation, Employment and Training HPV. These are clearly valuable but may more trade-offs once effort is considered.

Towards the bottom of the ranking are Registration, Maternal and Newborn Health (basic components), Birth History, Social Transfers (due to smaller disaggregation gaps), Health Insurance, Labour, Foundational Learning Skills 14], Education [3+], Post-natal Health Checks, Household Energy Use, Early Childhood Development, Household Involvement in Education [7–14], Household Characteristics, List of Household Members, Immunisation [0–Attendance to Early Childhood Education. These modules either have recent data, lower LNOB gains or more modest relevance, and therefore appear urgent when information need alone is considered.



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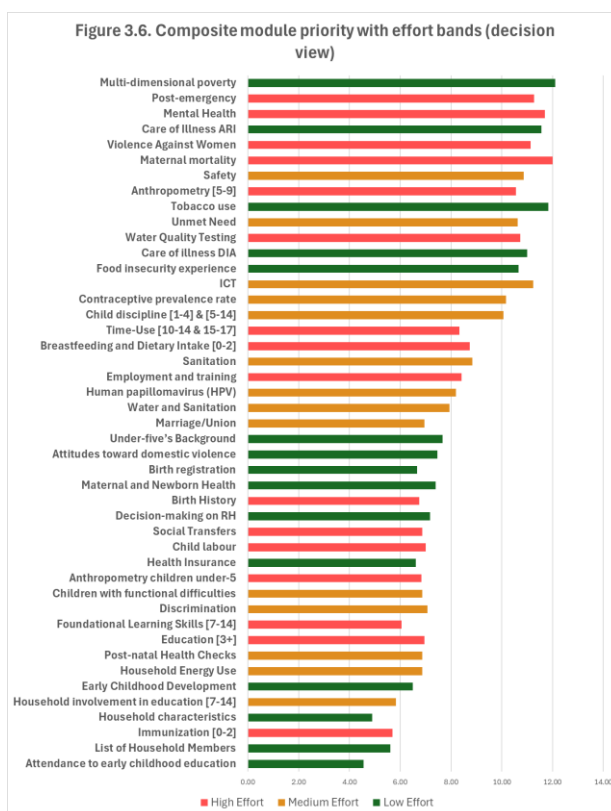
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3.6. Total score by effort

This is the primary “shortlist” Figure 3.6 for decision-makers. It shows that the very highest information-need modules span all three effort levels. Among high-priority but relatively low-effort modules are Multi-dimensional Poverty, Care of Illness ARI, Safety, Tobacco Use, Food Insecurity Experience and ICT. These offer excellent value for money and should almost certainly be included in any survey option.

A second group of high-priority modules, such as Mental Health, Maternal Mortality, Violence Against Women, Social Transfers and some anthropometry extensions, are marked (high effort). They are critical for policy come with heavy operational implications; their inclusion defines the difference between the equity-maximising and lean-feasibility options.

Modules with mid-range scores and medium or high effort, including Education [3+], Time-Use and Birth History, sit in the “negotiation zone”: desirable but not indispensable if resources are tight. At the lower end, several low-priority modules (including base content like Birth Registration and Immunisation [0-2]) show green effort bands; these are easy to implement but add less incremental information and could be trimmed if interview length becomes a concern.



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Two key decision views emerge from the findings: the Relevance × Recency matrix, and the ranked composite scores with Effort badges. These are summarised below as narrative descriptions and should be reproduced as figures from the accompanying Excel graphs in the final version of the report.

3.7. Relevance × Recency matrix

The matrix clearly shows that most priority modules sit in the top-right “high relevance, high recency gap” area, shaded green. This group includes ICT, Maternal Mortality, Violence Against Women, Multi-dimensional Poverty, Child Labour, Decision-making on Reproductive Health, Attitudes toward Domestic Violence, Child Discipline [1–4 & 5–14], Contraceptive Prevalence Rate and Under-five’s Background, signalling that both policy importance and data obsolescence point in the same direction.

Figure 3.7. Relevance–Recency matrix highlighting priority quadrants

Recency (5 outdated)	5	Time-Use [10-14 & 15-17]	Food insecurity experience Water Quality Testing Anthropometry [5-9]	Care of illness DIA Unmet Need Safety Post-emergency	Tobacco use Care of Illness ARI Mental Health	ICT Maternal mortality Violence Against Women Multi-dimensional poverty
	4			Water and Sanitation Sanitation Breastfeeding and Dietary Intake [0-2]		
	3		List of Household Members	Household involvement in education [7-14] Household Energy Use Foundational Learning Skills [7-14] Marriage/Union	Early Childhood Development Post-natal Health Checks Education [3+] Discrimination Children with functional difficulties Anthropometry children under-5 Health Insurance Social Transfers Maternal and Newborn Health Birth registration	Child labour Decision-making on RH Attitudes toward domestic violence Under-five’s Background Child discipline [1-4] & [5-14] Contraceptive prevalence rate
	2			Birth History	Employment and training	
	1			Household characteristics	Attendance to early childhood education	Immunization [0-2] Human papillomavirus (HPV)
		1	2	3	4	5
		Relevance (5-highly relevant)				

A second set of modules (yellow cells) combines high relevance with moderate recency gaps – for example Early Childhood Development, Post-natal Health Checks, Education [3+], Discrimination, Children with Functional Difficulties, Social Transfers, Maternal and Newborn Health and Birth Registration. These are important but somewhat less urgent in time-gap terms.

Modules clustered in red cells – such as Household Characteristics, List of Household Members, Birth History, Household Involvement in Education and some lower-priority topics in the current policy cycle– have either low relevance, recent data, or both. Except for the List of Household Members as this is mandatory part of the questionnaire, the rest of the modules are natural candidates for deferral or for implementation only under the most ambitious survey option. Overall, the matrix visually confirms where MICS 2027 can add the greatest marginal value.

3.8. Relevance × Effort matrix

This matrix makes the practical trade-offs very explicit. In the top-left cell (High Relevance, Low Effort), we see modules such as Attendance to Early Childhood Education, Decision-making on Reproductive Health, Birth Registration, Attitudes toward Domestic Violence, Under-five's Background, Tobacco Use, Care of Illness ARI and Multi-dimensional Poverty. These are “no-regret” choices: they strongly support national priorities while placing minimal extra burden on the survey.

Figure 3.8. Trade-offs between module relevance and implementation effort

High Relevance	Attendance to early childhood education	Post-natal Health Checks	Immunization [0-2]
	Decision-making on RH	Discrimination	Education [3+]
	Birth registration	Children with functional difficulties	Anthropometry children under-5
	Attitudes toward domestic violence	Human papillomavirus (HPV)	Child labour
	Under-five's Background	Child discipline [1-4] & [5-14]	Social Transfers
	Tobacco use	Contraceptive prevalence rate	Employment and training
	Care of Illness ARI	ICT	Maternal mortality
	Multi-dimensional poverty		Violence Against Women Mental Health
Medium Relevance	List of Household Members	Household involvement in education [7-14]	Foundational Learning Skills [7-14]
	Household characteristics	Household Energy Use	Birth History
	Early Childhood Development	Marriage/Union	Breastfeeding and Dietary Intake [0-2]
	Health Insurance	Water and Sanitation	Water Quality Testing
	Maternal and Newborn Health	Sanitation	Post-emergency
	Food insecurity experience	Unmet Need	
	Care of illness DIA	Safety	
Low Relevance			Time-Use [10-14 & 15-17] Anthropometry [5-9]
	Low Effort	Medium Effort	High Effort

High Relevance, Medium Effort modules include Post-natal Health Checks, Discrimination, Children with Functional Difficulties, HPV, ICT and Child Discipline [1–4 & 5–14]. They remain strong candidates but may require some prioritisation if resources are constrained.

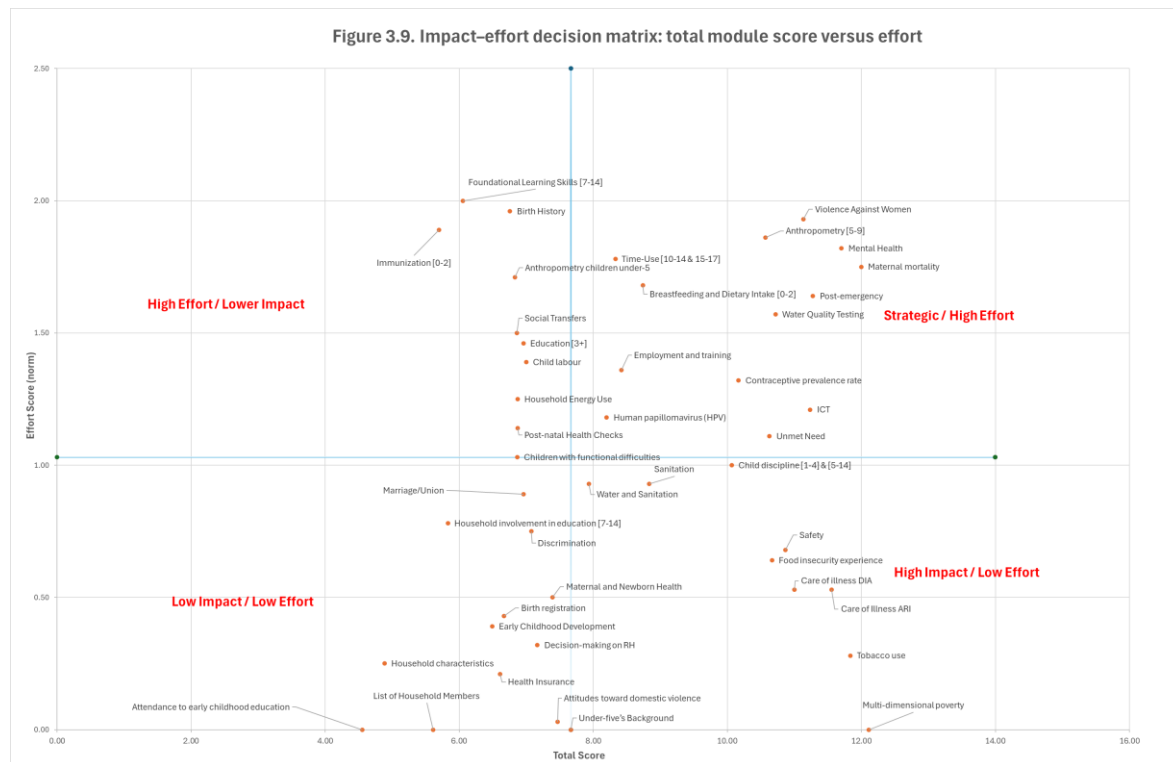
In the High Relevance, High Effort cell sit Immunisation [0–2], Education [3+], Anthropometry under-five, Child Labour, Social Transfers, Employment and Training, Maternal Mortality, Violence Against Women and Mental Health. These are strategic but demanding modules that define the difference between the equity-maximising and lean options.

At the bottom-right (Low Relevance, High Effort), Time-Use [10–14 & 15–17] and Anthropometry [5–9] stand out as low-return, high-cost candidates, which should only be considered if there is a compelling policy justification and adequate resources.

3.9. Impact–effort scatter plot (Total vs Effort)

Figure 3.9. brings together information need (total score on the horizontal axis) and implementation effort (vertical axis), creating four intuitive decision zones.

In the bottom-right quadrant (High impact / Low effort) are modules such as Multi-dimensional poverty, Tobacco use, Care of illness ARI, Care of illness DIA, Food insecurity experience and Safety. These combine very high total scores with relatively low effort, making them “must-have” modules that should be included in all survey options.



The top-right quadrant (Strategic / High effort) contains Violence Against Women, Anthropometry [5–9], Mental health, Maternal mortality, Water quality testing and Post-emergency, together with some moderately high-effort modules like Contraceptive prevalence rate, ICT and Unmet need. These modules deliver significant value but require heavy investment in training, interviewing time and logistics. Their inclusion is what distinguishes the ambitious equity-maximising package from more conservative options.

In the top-left quadrant (High effort / lower impact) we see Foundational Learning Skills [7–14], Birth history, Immunisation [0–2], Social transfers, Education [3+] and Child labour. These topics are not unimportant, but they offer less incremental value per unit of effort than the strategic high-effort group and should be considered only if there is sufficient budget and political demand.

Finally, the bottom-left quadrant (Low impact / low effort) includes modules such as Attendance to early childhood education, Household characteristics, List of household members, Health insurance, Decision-making on RH and Early childhood development. These are relatively easy to implement but also comparatively low on the composite priority scale; they are the natural candidates for deferral if the questionnaire needs to be shortened while preserving overall impact.

3.10. Composite Scores and Priority Groupings

Composite scores, which account for both information needs and effort, initially formed the basis for priority groupings. However, following stakeholder validation, strategic policy priorities resulted in the elevation of eight modules from conditional or deferred status to the recommended inclusion list. The **final validated module package** includes:

- **High priority (Include):** 34 modules with strong policy justification, including eight modules elevated during validation (Foundational learning skills, Water quality testing, Migration, Violence against women, Immunisation [0–2], Mental health of adolescents & youth [15–24], Maternal mortality, and Household Involvement in Education).
- **Medium priority (Conditional include):** 10 modules with clear information value but requiring further discussion on adaptations or partnerships (Fertility/Birth history, Breastfeeding and dietary intake, Contraception, Unmet need for family planning, Decision-making on reproductive health, HPV immunisation, Post-emergency, Early childhood education attendance, Social transfers, and Discrimination).
- **Low priority (Defer):** 5 modules where relevance is limited, data are relatively recent, or effort is disproportionate (Anthropometry 5-9 years, Time-use [10-17], Adult functioning [18-49], Employment and training [15-24], and Household energy use).

This validated configuration represents a strategic departure from pure composite scoring, prioritizing North Macedonia's specific policy commitments around education quality, gender-based violence, mental health, and comprehensive health monitoring.

4. Conclusion

The North Macedonia Multiple Indicator Cluster Survey (MICS) 2027 – implemented with the MICS7 questionnaires – Data Gap Assessment demonstrates that the survey can make a strategic contribution to closing the most important data gaps for children and women. By combining four dimensions – Relevance, Recency, Disaggregation Gaps and Effort – the DGA provides a transparent basis for distinguishing between modules that should be included, modules that could be added if resources allow, and modules that can reasonably be deferred to future rounds. This creates a clear link between policy priorities, information needs and the operational reality of implementing a complex household survey.

The validation workshop confirmed and expanded these priorities. Stakeholders made deliberate strategic choices to include high-effort modules such as Violence Against Women, Foundational Learning Skills, and Mental Health of Adolescents & Youth, acknowledging the increased resource requirements. The inclusion of Water Quality Testing was secured through partner commitments for laboratory support. The addition of Migration and Household Involvement in Education addresses emerging policy needs identified during stakeholder consultations. This validated package represents an **equity-maximizing approach** that prioritizes comprehensive data coverage over operational simplicity, requiring robust implementation planning and dedicated financing.

At the same time, the assessment recognises that survey length and complexity must be contained. Some high-value topics are also high effort. Including them will require additional funding, training, ethical preparation and, in some cases, adjustments to sample design. The composite score with $\alpha = 1.0$ makes these trade-offs explicit but does not replace judgement. Final decisions remain with the SSO and national partners.

The report therefore offers not a single prescription, but three coherent options – equity-maximising, strategic-impact and lean-feasibility – each consistent with the evidence. Selecting an option, or a calibrated hybrid, will allow North Macedonia to implement a deliberate, well-prioritised MICS that delivers the right data at an acceptable cost. Whatever choices are made, documenting them against the DGA ensures accountability and facilitates future rounds of assessment when priorities and data landscapes evolve.

5. Advisory Options for Government Decision

Note on Validated Module Package: The three options presented below were developed during the initial DGA analysis. Following the validation workshop on December 17, 2025, stakeholders selected a configuration that closely aligns with **Option A (Equity-Maximising Set)**, with all eight initially conditional/deferred modules elevated to the recommended inclusion list. The options are retained here for documentation purposes to show the decision-making framework, but the **final validated package** supersedes these advisory options.

Option A – Equity-maximising set (LNOB priority)

Option A maximises the equity and LNOB content of MICS 2027. It includes all base modules and most equity-relevant complementary modules, even when effort is high. The aim is to ensure that, after MICS 2027, there are no major blind spots in data on vulnerable groups.

Indicative content under **Option A** would include:

- All base modules on immunization, child health, nutrition, early childhood development, education, WASH and child protection.
- Child Functioning (disability), Food Insecurity Experience, Health Insurance, Menstrual Hygiene, Attitudes toward Domestic Violence.
- Migration, Maternal Mortality, Foundational Learning Skills [7–14], Household Involvement in Education, Mental Health [15–24], and the full Violence Against Women module, subject to ethical safeguards.
- Water Quality Testing, provided that laboratory and logistical arrangements can be secured.

The validated module package following the December 2025 workshop closely corresponds to Option A, confirming stakeholder commitment to maximizing equity coverage.

Advantages. Option A produces a highly rich dataset for equity analysis, supports a wide range of SDG indicators and national strategies, and positions North Macedonia as a leader in LNOB-sensitive data. It is particularly suited if additional funding can be mobilised around disability, social protection, learning or gender-based violence.

Risks and requirements. The questionnaire will be long and complex. Fieldworker training, supervision and ethical protocols must be robust. Response burden may increase, and careful piloting is essential. Strong coordination across ministries and UN agencies is required to support implementation and follow-up use of the data.

Option B – Strategic Impact Set

Note: Stakeholders selected an approach more ambitious than Option B, aligning with Option A specifications

Option B seeks a balance between breadth, depth and feasibility. It includes all high-priority base modules and a curated selection of complementary modules that correspond directly to national strategies and SDG reporting obligations. The focus is on modules whose data are likely to be used intensively in the next policy cycle.

Indicative content under **Option B** would include:

- All base modules on child health, nutrition, early childhood development, education, child protection and WASH.
- Child Functioning (disability), Food Insecurity Experience, Menstrual Hygiene, Health Insurance, Attitudes toward Domestic Violence and Decision-making on Reproductive Health.
- Either Social Transfers or Foundational Learning Skills (or shortened versions of both), depending on whether social protection or learning is judged the higher immediate priority.
- Violence Against Women if gender-based violence is a strategic priority and implementation capacity is adequate; otherwise deferred.
- Water Quality Testing only if partners can share logistical responsibilities.

Advantages. Option B delivers a high-impact dataset covering all major sectors while keeping the questionnaire within a manageable range. It ensures that data gaps most directly linked to current priorities are closed, enabling evidence-based adjustments to programmes and budgets.

Risks and requirements. Trade-offs are still required: not all desirable modules will fit. Inter-ministerial negotiation is needed to agree which high-effort modules are in or out. Adequate resources are still required, but less than under Option A.

Option C – Lean Feasibility Set

Note: This lean option was not selected. The validated package prioritizes comprehensive equity monitoring over operational simplicity.

Option C focuses on essential indicators only. It includes all base modules that are necessary for trend analysis and for a minimum set of SDG indicators, plus a very small number of complementary modules that address the most critical and unique gaps. The guiding principle is to protect data quality and operational feasibility above all.

Indicative content under Option C would include:

- Core modules on household roster and characteristics, basic education, standard child health and nutrition, maternal and newborn health, immunisation, WASH and child protection (child discipline, child labour, marriage/union).
- Child Functioning (disability) as the key LNOB module.
- A limited number of short complementary modules such as Food Insecurity Experience and Attitudes toward Domestic Violence.
- No high-effort complementary modules (for example, no Social Transfers, Foundational Learning, Time Use, full Violence Against Women or Maternal Mortality), and no Water Quality Testing if logistics are challenging.

Advantages. Option C keeps the survey short and relatively simple. It reduces costs, minimises respondent and interviewer fatigue, and lowers the risk of implementation difficulties. It is suitable when financial or human resources are constrained or when the SSO wishes to prioritise quality over scope.

Risks and limitations. Several important gaps will remain unaddressed, particularly on social protection, learning, discrimination and violence. Policymakers will need to rely on other data sources or future surveys for those topics. Option C therefore trades completeness for feasibility.

Across all three options, modules that are not applicable in the North Macedonia context (for example, malaria-related content or FGM) are excluded from the outset. Any decision to omit standard modules such as Immunisation [0–2] or Birth Registration should be taken cautiously and only where routine or civil registration data are assessed as sufficiently complete and reliable for decision-making. Such decisions should be documented with reference to the DGA evidence and alternative data sources.

Following validation workshop, the final package aligns with Option A specifications with eight additional modules elevated from conditional/deferred status.

MODULE NAME	CATEGORY	OPTION A	OPTION B	OPTION C	Validated Included
Antenatal Care	B	x	x	x	x
Anthropometric Measurements	B	x	x	x	x
Child Discipline [1-4 & 5-14]	B	x	x	x	x
Child Labour	B	x	x		x
Delivery Care	B	x	x	x	x
Early Childhood Development	B	x	x	x	x
Foundational Learning Skills [7-14]	B	x	x		x
Education: Attainment [3+]	B	x	x	x	x
Education: Attendance [3-24]	B				x
Facility-based Records of Vaccinations	B				x
Fertility/Birth History	B				
Household Characteristics	B	x			x
Household Involvement in Education [7-14]	B				x
Hygiene	B	x	x	x	x
ICT use	B	x	x		x
Immunisation [0-2]	B	x	x	x	x
Marriage/Union	B	x	x	x	x
Sanitation	B	x	x	x	x
Water	B	x	x	x	x
Water Quality Testing	B	x	x		x
Adult Functioning [18-49]	C				
Anthropometric Measurements [5-9]	C				
Attitudes Toward Domestic Violence	C	x	x	x	x
Birth Registration	C	x	x	x	
Care-seeking & Treatment of Diarrhoea	C	x			x
Care-seeking & Treatment of Symptoms of ARI	C	x			x
Child Functioning [2-4 & 5-17]	C	x	x	x	x
Employment and Training [15-24]	C				
Food Insecurity Experience	C	x	x	x	x
Health Insurance	C	x	x		x
Household Energy Use	C				
HPV [15-17]	C				
IYCF: Breastfeeding & Dietary Intake [0-1]	C				
IYCF: Initial Breastfeeding	C				
Maternal Mortality	C				x
Menstrual Health & Hygiene	C	x	x		x
Mental Health [15-24]	C	x			x
Migration	C				x
PN&NC: Birthweight	C				
PN&NC: Cord Care	C				
PN&NC: PNC for Mothers and Babies	C				
PN&NC: Signal Care Functions	C				
PN&NC: Thermal Care	C				
Post-emergency	C				
RC: Contraception	C				
RC: Decision-Making on Reproductive Health	C	x	x		
RC: Sexual Activity	C				
RC: Unmet Need, Desire for Last Birth, Period Return	C				
SDG16: Discrimination	C	x			
SDG16: Safety	C				
Social Transfers	C	x			
Time-Use [10-14 & 15-17]	C				
Tobacco Use	C				x
Violence Against Women	C	x			x

6. Next Steps and Responsibilities

Step 1 – Internal review and selection of preferred option (Q1 2026)

Lead: SSO; Partners: UNICEF, UN agencies, line ministries

- Convene the MICS Steering Committee to review the DGA findings and the three advisory options (A–C).
- Agree on the preferred option or a calibrated hybrid (for example, an “Option B+”), documenting any additions or exclusions relative to the DGA priority list.
- End-product: an agreed **preliminary module package** for MICS 2027.

Step 2 – Technical refinement of the module list (Q2 2026)

Lead: SSO Technical Working Group; Partners: sector ministries, UNICEF HQ/RO as needed

- Confirm the final list of MICS7 modules and sub-modules, including any adaptations to the North Macedonia context.
- Clarify which modules are fully funded and which require additional resources or partner support (e.g. Violence Against Women, Water Quality Testing, Social Transfers, Foundational Learning Skills).
- End-product: a **final technical module specification**.

Step 3 – Resource mobilisation and operational planning (Q1-Q3 2026)

Lead: SSO; Partners: Ministry of Finance, UNICEF, other development partners

- Align the chosen module package with the overall MICS 2027 budget and fieldwork plan.
- Secure any incremental funding needed for high-effort modules and specialised activities (e.g. laboratory testing, learning assessments, ethical protocols for VAW).
- End-product: a **funded implementation plan** for MICS 2027.

Step 4 – Questionnaire design, translation and pilot testing (Q3-Q4 2026)

Lead: SSO; Partners: UNICEF MICS team

- Adapt the MICS7 questionnaires to reflect the final module list and country-specific needs.
- Translate and cognitively test the questionnaires; conduct a pilot survey to check length, sequencing and sensitivity.
- Revise the instruments as needed, while tracking any departures from the DGA-based design.
- End-product: **final questionnaires and field manuals** for MICS 2027.

Step 5 – Implementation, documentation and feedback (2027)

Lead: SSO; Partners: UNICEF, line ministries

- Implement fieldwork in line with the agreed design and quality assurance protocols.
- Once data are available, document how the final module package compares to the DGA recommendations (e.g. as an annex to the final MICS report).
- Use the experience to inform any future updates of the Data Gap Assessment and related sectoral data strategies.

Whichever configuration is chosen, the DGA should remain a reference point for transparent, informed choice, not a rigid prescription.

The present report is accompanied by a set of technical annexes that document in greater detail the underlying data sources, scoring framework, indicators and policy linkages used in the Data Gap Assessment. While the main body of the report focuses on synthesising findings and presenting key recommendations, the annexes offer full transparency on methods and evidence, and can be used by technical counterparts for further analysis, validation and follow-up planning. The annexes included are:

Annex A: MICS7 questionnaires and topics/modules

Annex B: Surveys and census considered in this assessment

Annex C: Module relevance, recency, disaggregation gap and level of efforts

Annex D: MICS7 Indicators by module

Annex E: MICS Modules vs. National Policy and Legal Framework