

# **WHO-UNICEF Guidelines for Comprehensive Multi-Year Planning for Immunization**

**Update September 2013**

**Immunization, Vaccines and Biologicals**



**World Health  
Organization**

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# Abbreviations and acronyms

AD	auto-disable syringe
AEFI	adverse event following immunization
AFP	acute flaccid paralysis
AOP	annual operational plan
BCG	bacille Calmette-Guérin (tuberculosis vaccine)
cMYP	comprehensive multi-year plan
CSO	civil society organization
DHS	demographic and health survey
DQS	data quality self-assessment tool
DTP	diphtheria–tetanus–pertussis (vaccine)
DTP1	first dose of diphtheria–tetanus–pertussis (vaccine)
DTP2	second dose of diphtheria–tetanus–pertussis (vaccine)
DTP3	third dose of diphtheria–tetanus–pertussis (vaccine)
EPI	Expanded Programme on Immunization
EVM	effective vaccine management
FIC	fully immunized child
FS	financial sustainability
FSP	financial sustainability plan
GAVI	GAVI Alliance (formerly Global Alliance for Vaccines And Immunization)
GDP	gross domestic product
GIVS	Global Immunization Vision and Strategy
GVAP	Global Vaccine Action Plan
Hib	Haemophilus influenzae type B vaccine
HIPC II	highly indebted poor countries II
HPV	human papillomavirus (vaccine)
HR	human resources
HSCC	health sector coordinating committee
HSSC	health sector steering committee

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HSSP	health sector strategic plan
ICC	interagency coordinating committee
IIP	Immunization in Practice
IMNCI	integrated management of neonatal and childhood illnesses
IMR	infant mortality rate
JRF	joint reporting form
KAP	knowledge, attitude and practice
MCV1	first dose of measles-containing vaccine
MDG	Millennium Development Goal
M&E	monitoring and evaluation
MICS	multi-indicator cluster sampling survey
MLM	mid-level management module
MNT	maternal and neonatal tetanus
MoF	Ministry of Finance
MoH	Ministry of Health
MSL	measles
MTEF	medium-term expenditure framework
MYP	multi-year plan
NCD	non-communicable disease
NGO	non-governmental organization
NID	National Immunization Day
NITAG	National Immunization Technical Advisory Group
NHP	national health programme
NIP	national immunization programme
NNT	number needed to treat
NRA	National Regulatory Authority
OPV	oral polio vaccine
OPV3	third dose of oral polio vaccine
OR	operational research
PCV	pneumococcal conjugate vaccine
PHC	primary health care
PIE	post-introduction evaluation
PRSP	poverty reduction strategy paper
R&D	research and development
REC	Reaching Every Community (strategy)
RED	Reaching Every District (strategy)

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RV	rotavirus vaccine
SIA	supplementary immunization activity
SNID	sub-national immunization day
SWAp	sector-wide approach
SWOT	strengths, weaknesses, opportunities and threats
TT	tetanus toxoid (vaccine)
TT2+	coverage with the second or superior dose of tetanus toxoid (vaccine)
VPD	vaccine-preventable disease
UNICEF	United Nations Children's Fund
VitA	vitamin A
WHO	World Health Organization
YF	yellow fever (vaccine)

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# 1. Introduction

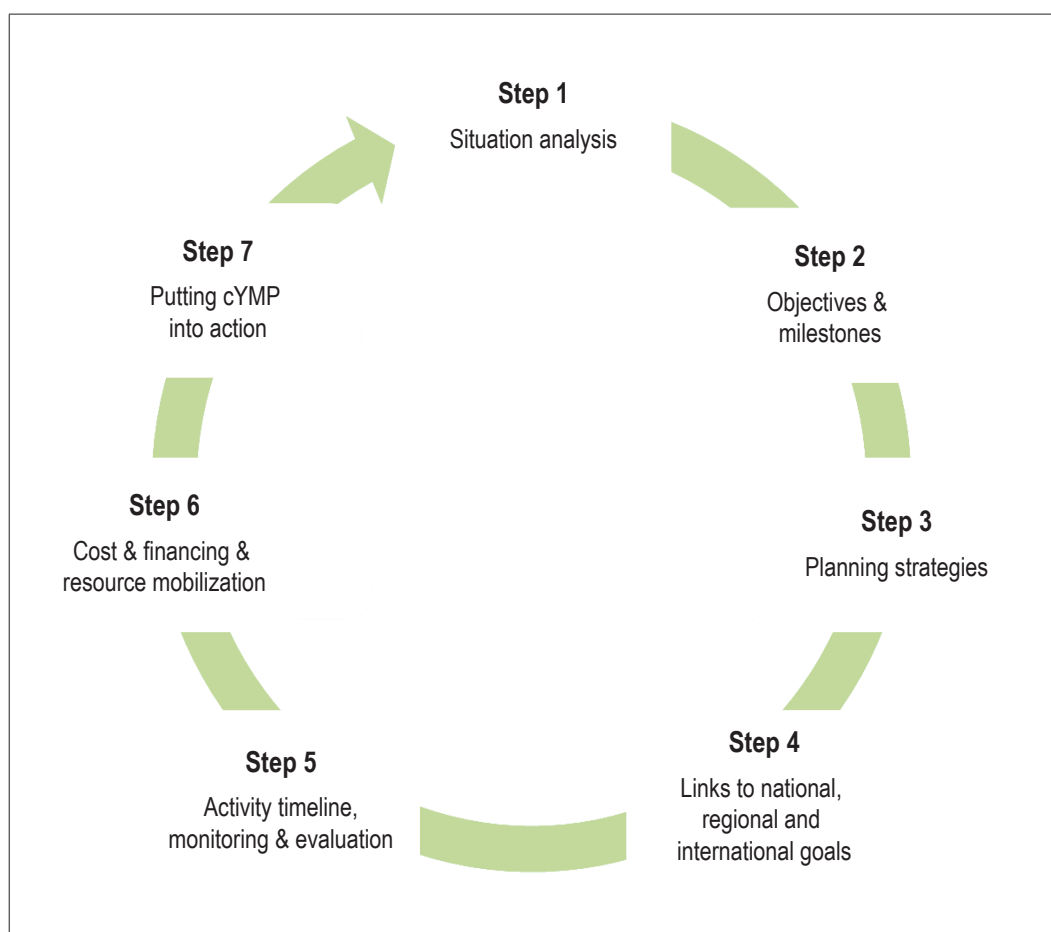
## 1.1 What is in the cMYP Guidelines?

This guide presents a series of steps to develop a comprehensive multi-year plan for immunization (cMYP), and includes both a planning tool and a costing tool. As managers review and assess the results of each step in the process, they should ensure that the plan meets global targets, national policy priorities and available resources. Repeated periodically, the cMYP becomes a living document that adjusts to changing conditions, generates empirically-based budget requests and provides up-to-date information for advocacy and reporting. This guide represents just one way of developing a multi-year plan. Many countries have existing planning methods that already address many of these elements and, in this case, the cMYP guidelines and tools can help ensure quality and act as a reference for national programme planners.

## 1.2 What are the main content areas of a multi-year immunization plan?

A comprehensive multi-year plan for immunization contains the following Seven Planning Steps that are outlined in Figure 1 and which will be followed throughout these guidelines.

Figure 1: cMYP planning steps



**STEP 1. Situation analysis:** Develops a situation analysis based on a review of health system barriers, successes and promising practices, as well as identifying the strengths and weaknesses of the immunization system and disease control initiatives.

**STEP 2. Objectives, milestones and priority-setting:** Provides national goals, objectives and strategies for three to five years, based on this situation analysis and on priority-setting.

**STEP 3. Planning strategies:** Outlines the means (the “how”) by which national immunization objectives will be achieved.

**STEP 4. Links to national health plans and global goals and targets:** Links immunization strategy to national health sector strategies, goals and targets, and to regional targets and the Global Vaccine Action Plan.

**STEP 5. Setting an activity timeline and monitoring and evaluation framework:** This step establishes a timeline for main activities and milestone achievements, and develops a national monitoring and evaluation framework for all immunization components.

**STEP 6. Costs, financing and financing gaps:** Includes costing and financing assessments to be linked to the relevant planning cycle and to the planning and budgeting cycles of the Ministry of Health (MoH). This step identifies financing gaps, resource mobilization strategies and cost-benefit analysis, as well as re-evaluating the plan against available resources.

**STEP 7. Putting the cMYP into action:** This step outlines detailed annual workplans and the linking of these plans to national planning and budgeting cycles at national and sub-national levels of the health system. The step also involves annual, midterm and final review of the cMYP, for adjustments to strategy, based on lessons learned.

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A cMYP uses technical costing and planning tools to generate a budget request for a priority social sector investment. While technical rigour is essential for national and sub-national planners and managers, the output also needs to be accessible to national political leaders, ministries of finance, planning and education, non-state actors, the public and, even in certain contexts, the media. For this reason, a summary report should also be published, and disseminated in a readily accessible format which includes the main objectives, expected outcomes and costs of the plan.

**Annex 8a** provides a template for such a summary report.

**Annex 8b** provides an example of how a cMYP summary report could be constructed.

### 1.3 What is new about this approach to national planning?

These guidelines are an update to guidelines originally developed by WHO and UNICEF in 2005. Since then, there have been important developments in new vaccines, immunization technologies and global health policies. During a series of consultations undertaken in 2011 and 2012, cMYP stakeholders recommended a series of revisions, which are reflected in these updated guidelines. The revisions include the following.

***Global Vaccine Action Plan:*** Ensures that the strategies in the plan are sufficiently comprehensive using the recently developed Global Vaccine Action Plan (GVAP) as a framework (see **Annex 4**).

***Links to health sector planning:*** Emphasizes, in more detail, the links of the national immunization programme (NIP) with health sector planning and financing and annual workplans, and integrates and consolidates activities with other health interventions to solve shared problems and contribute to shared solutions.

***Seven planning steps for seven immunization system components:*** Planning is now in seven recommended planning steps for seven immunization components (see Figure 1). These steps link closely with seven health-system building blocks and health sector strategies (see Figure 2) in order to support the general direction in immunization strategic planning of closer linkages between programme and sector planning.

***Monitoring and evaluation (M&E) frameworks and plans:*** Develops a monitoring and evaluation framework that enables quarterly or annual tracking of progress, including monitoring of all immunization system components, including surveillance data, immunization expenditures and sources of finance and measurement, and also tracking of immunization inequalities.

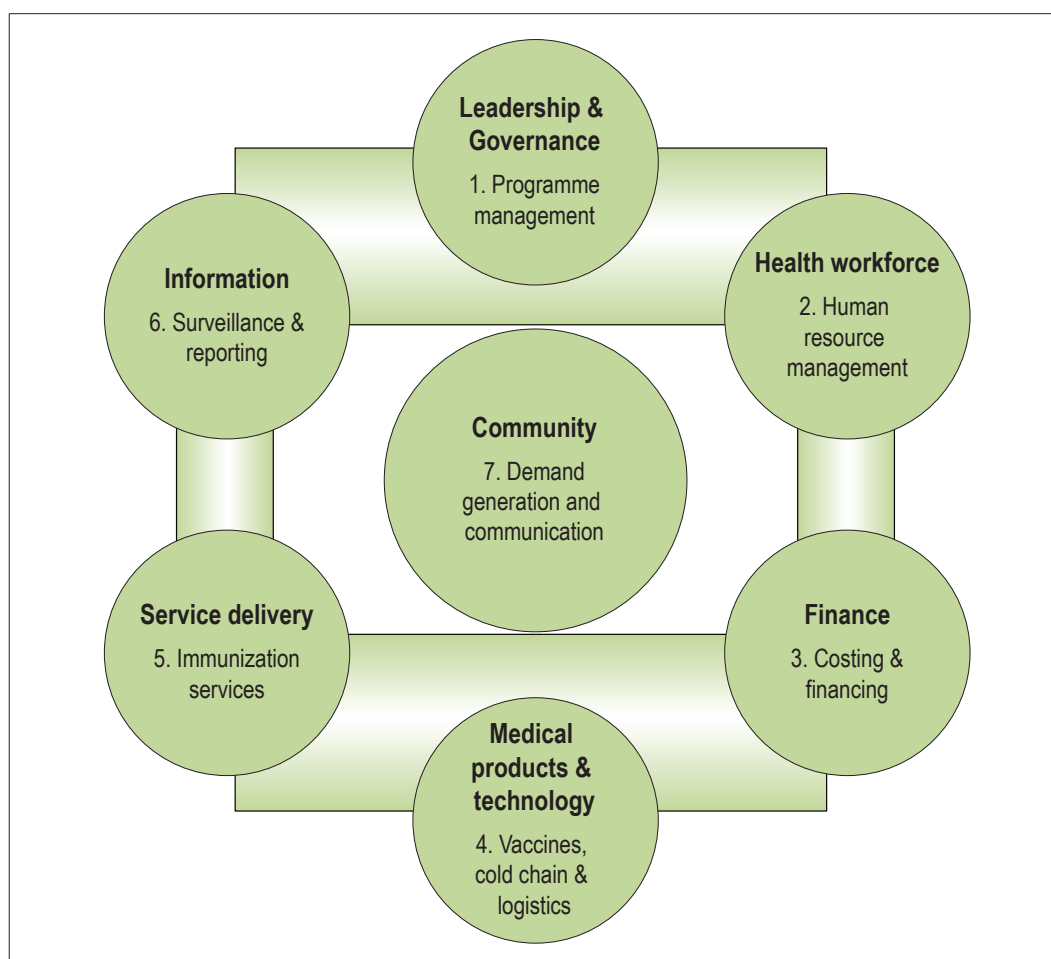
***User-friendly costing and financing:*** Evaluates the costs and financing of the cMYP to ensure financial sustainability with more user-friendly data entry and analysis tools.

Figure 2 demonstrates the essential principle of systems thinking applied throughout these guidelines. For a system to function well, all parts must be balanced, connected and coordinated. Communities are at the very centre of the health-system framework, and this area is conceptualized in the immunization framework as including *demand generation and communication*.

Leadership and governance are conceptualized as *programme management for immunization*. This includes *advocacy* – which is bringing information for decision-making to senior policy makers. As immunization systems have developed, over the last 10 years, and budgets expanded, the importance of these programme functions has increased, particularly in terms of law, policy-making, regulation, financial management and coordination of various stakeholder interests, including government, the private sector and civil society.

*Human resources management and costing and financing*, component areas 2 and 3 in Figure 2, are now identified as both health system and immunization planning components, in recognition of the need for immunization managers to work more closely with ministries of health on the broader health-system issues that affect immunization performance. Immunization component areas 4–6 in Figure 2 also closely mirror health sector planning system areas, and reinforce the notions of synergies and integration with health systems for maximizing immunization programme performance.

**Figure 2: Immunization system components linked to health systems building blocks**



## 1.4 What is the Global Vaccine Action Plan (GVAP)?

The Decade of Vaccines Global Vaccine Action Plan (GVAP), adopted by WHO Member States in May 2012, is a new roadmap to prevent, by 2020, millions of deaths through more equitable access to existing vaccines for people in all communities, by reinforcing five goals as outlined in Figure 3. The GVAP builds on the Global Immunization Visions and Strategy (GIVS) developed by WHO and UNICEF in 2005. Although remarkable progress has been made in immunization over the last ten years, and also towards meeting the GIVS goals, vaccine-preventable diseases remain a major cause of morbidity and mortality. Coverage gaps persist between high-, middle- and low-income countries, as well as within countries, often varying within populations according to income level, social status and geographical location.

Sustainable financing and country ownership are key GVAP principles. The GVAP opens up new policy and programmatic space for countries to innovate to meet these challenges. Countries agreed to report their progress towards the GVAP goals annually through a common monitoring and evaluation framework.

**Figure 3: Goals of the Decade of Vaccines**

Goals of the Decade of Vaccines (2011–2020)	
1)	Achieve a world free of poliomyelitis.
2)	Meet global and regional elimination targets.
3)	Meet vaccination coverage targets in every region, country and community.
4)	Develop and introduce new and improved vaccines and technologies.
5)	Exceed the Millennium Development Goal 4 target for reducing child mortality.

The next decade will bring new opportunities and challenges. Many new and improved vaccines may potentially become available during this decade. Economic growth, particularly in emerging economies, will create opportunities for the funding and manufacturing of affordable vaccines, enabling the introduction of newer vaccines into the national immunization programmes of an increasing number of low- and middle-income countries. Countries are increasingly able to finance their own immunization programmes. The economic benefits of immunization will contribute to overall growth. In addition, increasing availability of information will play an essential role in boosting and maintaining public demand for immunization, and facilitating delivery, monitoring and evaluation. Challenges to be overcome include already over-burdened supply, logistics and financial management systems that will suffer additional pressures from the scale-up of immunization activities and the introduction of new vaccines. Sustainable financing will require increasing transparency, accountability and efficient use of immunization budgets. Countries must minimize or close funding gaps, which are driven by increasing immunization programme delivery costs, renewed efforts to increase coverage and the introduction of new vaccines.

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Achieving the goals of the Decade of Vaccines (2011–2020) will only be possible if all stakeholders involved in immunization commit themselves to, and take action to achieve, the six strategic objectives (see below), uphold the Decade of Vaccines guiding principles when implementing all the actions and regularly monitor and report progress towards all strategic objectives through a joint monitoring and accountability framework. Member States should develop and periodically revise strategic cMYPs during the decade, building on national priorities and guided by the GVAP, regional targets and national health sector goals and strategies.

## 1.5 What are the GVAP strategies?

The GVAP highlights the need for continuous progress towards the following six strategic objectives to enable the achievement of the goals of the Decade of Vaccines.

- (i) *All countries commit to immunization as a priority.* Key indicators to monitor progress towards this strategic objective at the country level are the presence of a legal framework, or legislation that guarantees financing for immunization, and the presence of an independent technical advisory group that meets defined criteria.
- (ii) *Individuals and communities understand the value of vaccines and demand immunization as both their right and responsibility.* Progress towards increased understanding and demand can be evaluated by monitoring the level of public trust in immunization, measured by surveys on knowledge, attitudes, beliefs and practices.
- (iii) *The benefits of immunization are equitably extended to all people.* Progress towards greater equity can be evaluated by monitoring the percentage of districts with less than 80% coverage with three doses of diphtheria-tetanus-pertussis (DTP)-containing vaccine, and coverage gaps between lowest and highest wealth quintile (or another appropriate equity indicator).
- (iv) *Strong immunization systems are an integral part of a well-functioning health system.* The strength of health systems can be evaluated based on drop-out rates between the administration of the first and third doses of DTP vaccine. The quality of data is important for monitoring the functioning of a health system. Data quality can be evaluated by monitoring whether immunization coverage data is assessed as high quality by WHO and UNICEF.
- (v) *Immunization programmes have sustainable access to predictable funding, quality supply and innovative technologies.* Key indicators to monitor progress towards this strategic objective will be the percentage of routine immunization costs financed through government budgets, and globally installed capacity for production of universally recommended vaccines within five years of licensure/potential demand.
- (vi) *Country, regional and global research and development (R&D) innovations maximize the benefits of immunization.* Key indicators of progress towards this strategic objective include: proof of concept for a vaccine that shows greater or equal to 75% efficacy for HIV/AIDS, tuberculosis or malaria, and the initiation of phase III trials for a first generation universal influenza vaccine. In addition, country research and development capacity can be measured by the institutional and technical capacity to manufacture vaccines and/or carry out related clinical trials and operational and organizational research.

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## 1.6 How to apply the GVAP in developing a cMYP?

As outlined above, the GVAP has developed a set of guiding principles, goals, strategic objectives and main actions to achieve global health targets for immunization, and these can provide guidance for developing national strategies (see GVAP checklist in **Annex 1**). GVAP is not a strategic plan as such. It rather sets a framework within which WHO and UNICEF and the global immunization community envisage immunization programmes developing in the coming 10 years. It provides a set of guiding principles and a menu of possible strategies. In preparing cMYPs, countries can select those that are most relevant to their own situation.

## 1.7 Linking to national health sector planning processes

National immunization programmes have been developing strategic multi-year plans over the past decade or more. This guide provides an opportunity for national programmes to consider the proposed strategies and actions in the new GVAP when updating current plans, or in developing new strategic plans for the immunization programme. All efforts should be made to position the immunization programmes within the broader national health sector strategies and in identifying clear synergies and opportunities for integration within the health programmes to support achievement of the overall objectives of reducing the nation's morbidity and mortality rates.

The health sector plan identifies health priorities within this context, and describes programmes and strategies to achieve measurable health outcomes. Government health programmes, such as immunization, should be part of the national health sector plan. As the national health sector plan is the basis for formulating the national health budget, the health sector plans will be a key document to consider while preparing the cMYP. In addition, the objectives, strategies, cost and financing information from the cMYP should be integrated within the national health plan and budget.

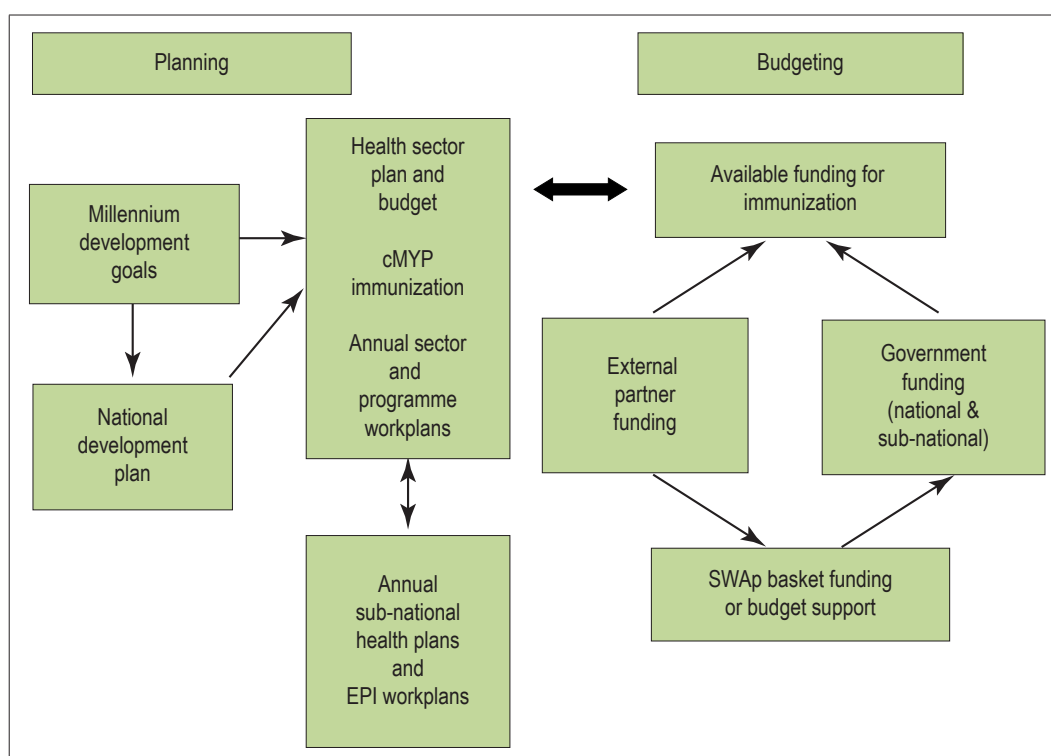
The resources required for a NIP are determined, either within the annual budget for the MoH, or as part of a three-year rolling medium-term expenditure framework (MTEF). Since government funding may be from both central and sub-national sources, the cMYP needs to take into account sub-national budgets, costs, expenditures and priorities. Analysing costs and projecting budgets at sub-national level is particularly important in countries where decentralization has put decision-making and resource allocation in the hands of local government authorities.

The relationships between the immunization programme planning, budgeting/financing processes and overall national processes are illustrated in Figure 4, which shows that on the planning side, the Millennium Development Goals (MDGs) and National Development Plans provide a framework for generating the overall health sector plan, of which the cMYP is a part. On the budgeting and financing side, external partner funding is either passed through the investment budget (as extra-budgetary), or is combined with recurrent government funding (through budget support or through basket funding for sector-wide approaches (SWAs)). The cMYP costing tool can be used to capture and allocate immunization expenditures through these various frameworks.

In developing the cMYP, it is useful to consider where links can be made to other health interventions as a more effective way of achieving national health goals. For example, there are real benefits to combining immunization with three other interventions, namely vitamin A (VitA) supplementation, the distribution of insecticide-treated bed nets for malaria prevention, and anti-helminths against soil-transmitted helminths. Some vaccines (such as pneumococcal, rotavirus or human papillomavirus (HPV) vaccines) need to be supplemented with other approaches to achieve more comprehensive control of pneumonia, diarrhoea and cervical cancer. Planning for such links may involve a review of other programme health plans, for integrated management of neonatal and childhood illnesses (IMNCI), malaria, nutrition and non-communicable disease (NCD) control, to identify areas of synergy. This can be followed by regular discussions to determine the best strategies to adopt, and to plan activities for training, service delivery and monitoring.

Many countries have developed essential medical care benefit packages which invariably include immunization and other maternal and child health-care interventions delivered either at fixed health facilities or through health outreach services. Integration of programmes through common delivery systems promotes efficiency through sharing of costs and, most importantly, enhances impact through making more life-saving interventions accessible to the population. The cMYP costing tool can be used to capture and allocate the immunization portion of expenditures in such settings.

**Figure 4: Illustration of links between cMYP, budgeting and financing processes**



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## 1.8 Processes for development, implementation and monitoring of the cMYP

*A sequential process is envisioned for development of the cMYP. The process should commence by convening meetings of all key immunization actors, including those working at sub-national level, to identify linkages and coordinate and integrate all aspects of the national programme into one planning process.*

The meetings should include participants from all sections of the immunization system, including those responsible for accelerated disease control (e.g. polio, measles, maternal and neonatal tetanus (MNT) and new vaccines), logistics, routine immunization, surveillance, communicable disease control and laboratory services, new vaccine introduction, health planning, health economics, budgeting, communication and social mobilization. Counterparts from the Ministry of Finance (MoF), Ministry of Budget and local governments directly responsible for health sector financing should also be included. Participants should be briefed on the findings of immunization reviews and studies conducted within the last few years, including findings from Expanded Programme on Immunization (EPI) reviews, coverage surveys, cold-chain assessments, recommendations of the National Immunization Technical Advisory Group (NITAG), data-quality assessments and other studies. Participants also need to be briefed on the seven immunization components and on the steps in the planning process. Separate plans made previously for polio, measles, cold-chain and maternal and neonatal tetanus (MNT), need to be fully incorporated into the cMYP, and further linked to other health interventions. In addition, the costs (campaigns, routine programme and training) need to be included in the costing and financing process of the cMYP. All state actors must arrive at a common vision of national programme priorities and strategic direction.

*Following this, convene the interagency coordinating committee (ICC) or health sector steering committee (HSSC) or other relevant stakeholders meeting.*

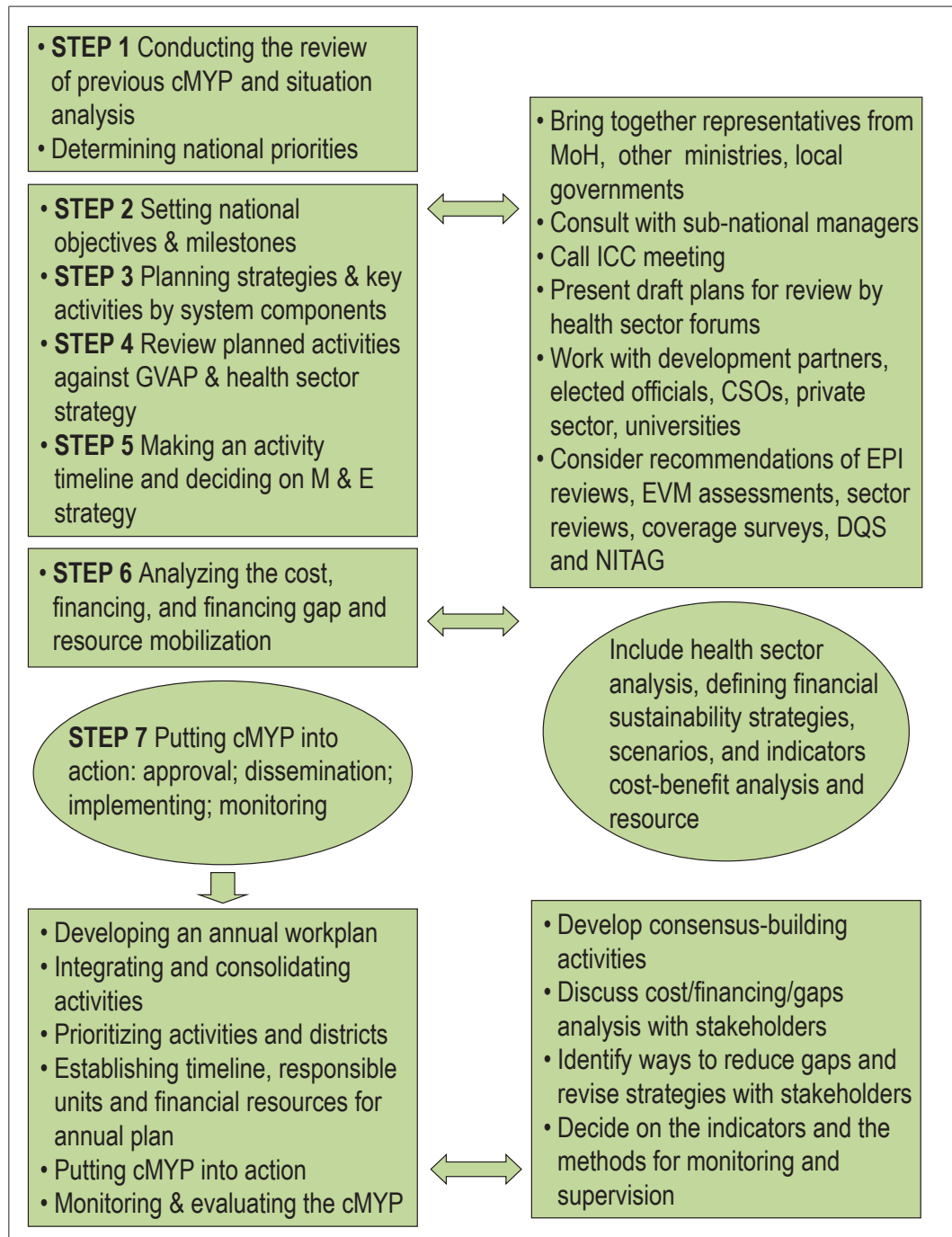
Involving a wider group of stakeholders is important to: (a) ensure **all** activities, including accelerated disease control activities, are articulated from the outset; (b) facilitate the linkage between the cMYP annual plans and budgets to sector and national budgets and plans; (c) advocate for the immunization programme as a means to achieve the Child Health MDG (MDG4); (d) capture all external and government financial flows to the NIP; (e) mobilize the resources needed to reduce or eliminate financing gaps. In most countries, the interagency coordinating committee (ICC) meeting is the most relevant venue to meet and discuss with all partners. In some countries, however, it may be more appropriate to work with sector coordinating bodies such as SWAp health partners. At some point, the same state actors identified in the first step should be brought together with the ICC representatives, since the cMYP includes assessments of past expenditures and future programme financing from all sources.

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*Thirdly, consult and involve elected leaders, health sector and Ministry of Finance officials and civil society, private sector and academic representatives.*

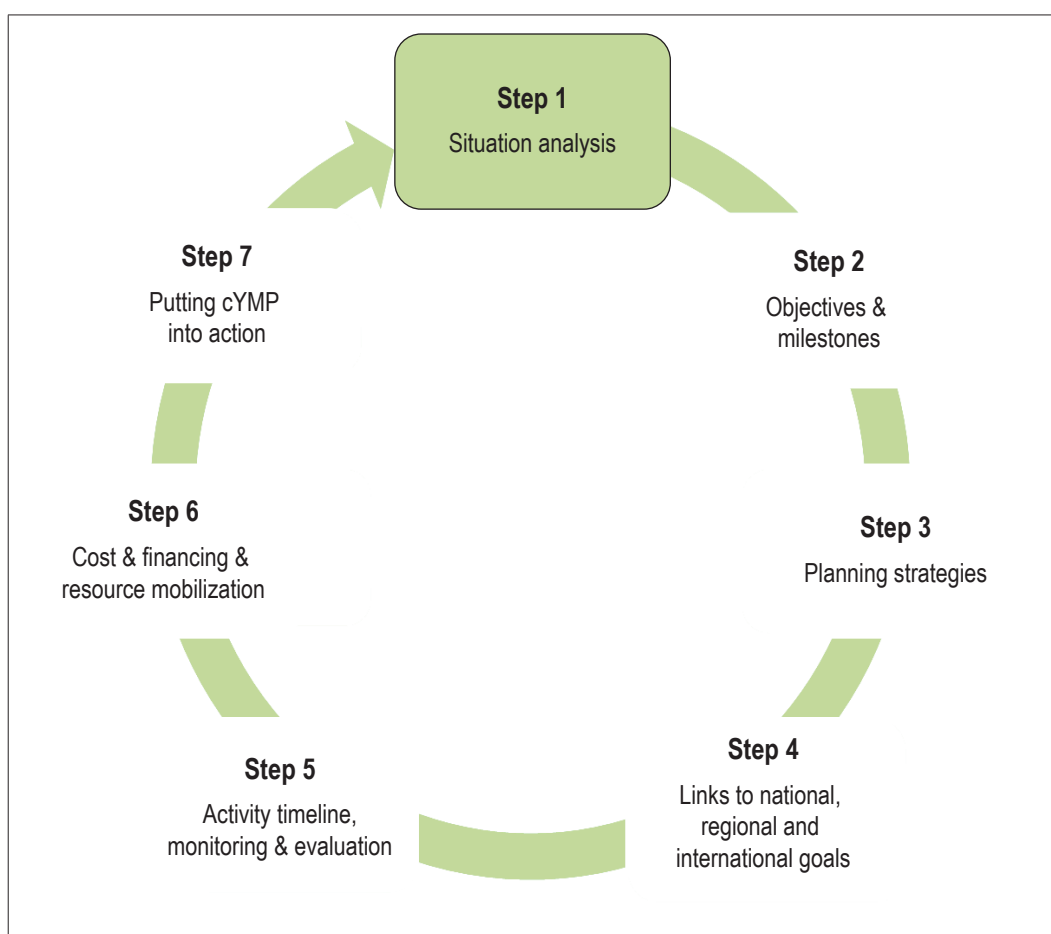
Elected leaders engender political commitment to the goals of the programme. Their engagement is not only essential for resource mobilization, but also for the enactment of laws and regulations to assure sustainable public financing. The engagement of civil society will add value to the cMYP, particularly by giving voice to non-state actors, including the socially and economically disadvantaged such as ethnic minorities or the urban poor, and in collaborating with other agencies to extend health-care services to populations in conflict or post-conflict settings. In addition, civil society can play a role in advocating for increased national funding for immunization and working with communities on vaccine acceptance. Engagement of the private medical, supply chain and equipment maintenance sector will be important to ensure high-quality services are provided. Academic institutions should also be engaged in order to strengthen the research and evaluation components of the programme. Engagement of the private medical sector will be important to ensure that high-quality services are universally provided in both sectors. Many of these stakeholders and constituencies can have input into immunization policy and planning decision-making through representation in National Immunization Technical Advisory Groups (NITAGs) and their respective secretariats. Figure 5 summarizes the planning steps for the development of the cMYP.

**Figure 5: Process for creating a cMYP**



## 2. Creating a comprehensive multi-year plan

### Step 1: Conducting a situation analysis



*The aim of this Step is to suggest the main content areas for a situation analysis. All efforts should be made to ensure that the most reliable dataset is used for the situation analysis from a wide variety of sources, as described in Figure 6.*

**Figure 6: Potential sources of data for situation analysis**

- 1) Routine health information data and reports.
- 2) Last cMYP and the annual workplan derived from it.
- 3) ICC, NITAG and external partner minutes and reports.
- 4) WHO/UNICEF annual joint reporting forms (JRF).
- 5) Post-introduction evaluations (PIE) for new vaccines.
- 6) EVM and cold-chain inventory reports.
- 7) Immunization coverage surveys multi-indicator cluster sampling surveys (MICS).
- 8) EPI programme reviews and other immunization-related assessments.
- 9) Demographic and health surveys (DHS) (including equity data, health sector reviews and evaluation reports).
- 10) National health sector strategic plans and public expenditure flows.
- 11) Health sector performance reports.
- 12) Promising/best practices documentation and qualitative health studies.
- 13) Surveillance reviews and reports.

The situation analysis is separated into four areas, all of which overlap and are summarized in the final section (strengths and weaknesses). These four areas are:

- a) Routine immunization;
- b) Accelerated disease-control initiatives;
- c) Analysis of immunization system performance;
- d) Strengths and weaknesses of programme performance.

The situation analysis takes into account the fact that, although the national plan for immunization is a technical plan based on immunization systems components, wider health- system constraints also affect immunization performance. This being the case, these factors should be taken into account when drafting the cMYP and when negotiating with main stakeholders on strategies to address system-wide barriers.

### **2.1.1 Analysis of routine immunization services**

Routine immunization programming is the basis for achievement of the cMYP objectives and targets. The situation analysis of routine immunization should include review of all components of the immunization system, including immunization coverage trends, immunization demand, immunization equity and new vaccines introduction, surveillance and adverse events following immunization, and examination of budget execution. A line listing of districts or sub-national levels should be undertaken to determine the areas of the country with the lowest levels of coverage, demand and equity. This will assist objective and priority setting in Step 2 of the planning process.

**Table 1A: Situation analysis routine immunization**  
(sample table for illustration only)

Routine immunization	Suggested indicators	National status		
		2010	2011	2012
Immunization coverage	Official coverage estimates % DTP3	72%	78%	84%
	Official coverage estimates % Measles	69%	71%	76%
	Other official coverage estimates as per immunization schedule	-	-	-
	Most recent survey coverage % DTP3	68%	-	-
	Percentage fully immunized child	60%	65%	73%
Immunization demand	Percentage drop-out DTP1 – DTP3	12%	11%	10%
	Percentage drop-out BCG – Measles	20%	17%	15%
Immunization equity	Percentage gap in DTP3 between highest and lowest socio-economic quintiles	30%	-	-
	Number and proportion of districts with DTP3 coverage >80%	10 (8%)	9 (7%)	8 (6%)
	Number of high-risk communities identified for accelerated routine immunization programming	45	40	38
New vaccines introduction	Number of new vaccines introduced into the routine schedule in the last plan period	-	-	1
	Pentavalent coverage	60%	71%	76%
	Rotavirus coverage	0%	0%	60%

### 2.1.2 Analysis of accelerated disease-control initiatives

Table 1B shows an example of a situation analysis of accelerated disease-control initiatives (based on previous years' data). Each initiative of accelerated disease control (polio, measles, maternal and neonatal tetanus, Hepatitis B, yellow fever (YF), meningitis A, rotavirus etc.) provides basic indicators of each previous years' performance under the categories of routine immunization, surveillance and supplementary immunization.

**Table 1B: Situation analysis by accelerated disease-control initiatives**  
(sample table for illustration only)

Disease-control initiative	Suggested indicators	National status <sup>1</sup>		
		2010	2011	2012
Polio	OPV3 coverage	72%	74%	82%
	Non-polio AFP rate per 100 000 children under 15 years-of-age	2.5	2.5	2.5
	Number of rounds of national (NID) and sub-national (SNID) immunization days Coverage range	-	-	NIDs 2/year with 87%–90% coverage SNIDs 2/year with 92%–95% coverage
MNT	TT2+ coverage	50%	48%	60%
	Percentage target population protected at birth from neonatal tetanus	50%	50%	60%
	Number and proportion of districts reporting >1 case of neonatal tetanus per 1000 live births	-	-	7 (30%)
	Was there an SIA? (Y/N)	-	-	Y
	Neonatal deaths reported and investigated	20	30	25
	Delivery at facility rate	60%	65%	70%
Measles & rubella	Measles / MR vaccination coverage (1st dose)	69%	71%	76%
	Measles / MR vaccination coverage (2nd dose)	0%	0%	50%
	Number of laboratory confirmed measles/rubella outbreaks	none	3	5
	Geographic extent national immunization day (NID) Age group Coverage	-	-	National NID 2011 0–60 months 92%
	Total measles cases (Lab/clinical/epidemiological)	50	60	64
	Total rubella cases (Lab/clinical/epidemiological)	-	-	64
Yellow fever	YF coverage	36%	38%	40%
	Number and percentage of districts reporting >1 suspected case	0 0%	7 districts 14%	0 0%
	Was a preventive campaign conducted? (Y/N)	-	Y	-
Epidemic meningitis	Meningococcal A coverage	0%	0%	76%

<sup>1</sup> It is useful to include data source (e.g. WHO/UNICEF Joint Reporting Form, GAVI Annual Progress Report, etc.) for each indicator.

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### 2.1.3 Analysis by immunization system components

Before undertaking a situation analysis of immunization system components, it will be necessary to review the various evaluations and technical assessments undertaken over the last planning cycle. Table 1C shows an example of a rapid situation analysis of immunization planning components based on the previous years' data and data from other reviews and evaluations, such as EPI reviews. The cMYP should be revised, as needed, to fit into the health sector and planning cycle. For each health systems building block, national immunization performance indicators are shown for each year. Data may be derived from various sources, as described earlier in Figure 6.

References should also be made to recent situation analyses of the health system conducted in order to develop synergies between immunization programming and health system strengthening. This can be taken from an existing health-system review, situation analysis of the national health programme (NHP) or from an EPI review. Analysis of health-system components recognizes how wider health-system barriers (such as shortage of human resources, or shortage of operational funds for basic health services) can impact on immunization performance.

**Table 1C: Situation analysis of routine EPI by immunization system components**  
(sample table for illustration only)

System components	Suggested indicators	RESULTS		
		2010	2011	2012
1. PROGRAMME MANAGEMENT				
Law & regulation	What numbers of functions are conducted by the NRA?	3	3	4
	Is there legislation or other administrative order establishing a line item for vaccines?	No	No	No
	Is there legislation identifying the sources of public revenue for immunization financing?	No	No	No
Policy	Has the national immunization policy been updated in the last five years?	No	No	Yes
Planning	Does the country have an annual workplan for immunization funded through Ministry of Health budgeting processes?	No	Yes	Yes
	What is the number and proportion of districts with an annual micro-plan for immunization?	5 (3%)	7 (5%)	8 (6%)
Coordination	What were the number of ICC (or equivalent) meetings held last year at which routine immunization was discussed?	2	2	2
	What were the number of NITAG (or equivalent) meetings held last year?	0	1	3
Advocacy	How many presentations on immunization performance or expenditures were made to parliament?	0	1	2
2. HUMAN RESOURCES MANAGEMENT				
HR numbers	Number of health workers per 10 000 population	2.4	2.8	3
	Percentage vaccinator posts currently vacant	30%	20%	10%
Capacity-building	Number & proportion of health workers & managers trained in immunization services through MLM or IIP training per year	60 (3%)	70 (3.5%)	80 (4%)
	Percentage of health workers trained in immunization in the last two years (data from PIE and EPI reviews)	80%	85%	90%
	Curriculum review for pre-service medical and nursing immunization education conducted		Yes	
Supervision	Average number of central supervision visits to each district level per year	6	6	6
3. COSTING AND FINANCING				
Financial sustainability	What percentage of total routine vaccine spending was financed using government funds (including loans and excluding external public financing)?	8%	10%	12%
	What proportion of the line item in the national budget for immunization was actually funded?	50%	70%	100%
	What percentage of immunization resources are being met by the domestic health budget (as identified in the annual budget plan)?	40%	45%	50%
	Government expenditures on routine immunization per surviving infant (JRF 6700)	US\$__	US\$__	US\$__
	Are sub-national immunization budgets and expenditures monitored and reported at national level?	No	No	Yes

System components	Suggested indicators	RESULTS		
		2010	2011	2012
4. VACCINE SUPPLY, QUALITY & LOGISTICS				
Transport / mobility	Percentage of districts with a sufficient number of supervisory/EPI field activity vehicles /motorbikes/bicycles (based on their need) in working condition	100	80	70
Vaccine supply	Was there a stockout of any antigen at national level during the last year?		Yes	Yes
	If yes, specify duration in months		5–12	3–12
	If yes, specify which antigen(s)		Measles	BCG
Cold-chain/ logistics	Percentage of districts with adequate numbers of appropriate and functional cold-chain equipment	ND	ND	80%
	What was the year of last inventory assessment for all cold-chain, transport and waste management equipment (or EVM)?	EVM conducted		
	Number of PHC facilities with >80% score for all indicators on the last EVM assessment	50	60	70
	Percentage districts with availability of a cold-chain replacement plan	50%	60%	70%
Waste disposal	Availability of a waste-management policy and plan	No	Yes	Yes
5. IMMUNIZATION SERVICES (refer also to Table 1A and Table 1B)				
Routine coverage	DTP3 coverage	72%	78%	84%
Demand	National DTP1–DTP3 drop-out rate	12%	11%	10%
	Percentage of districts with drop-out rate DTP1–DTP3 >10%	6%	3%	2%
Equity	Number of districts <80% coverage	10	9	8
	Percentage gap between lowest/highest socio-economic quintile	35% in 2008	30%	-
	Percentage planned outreach visits conducted	40%	50%	60%
	Line list of high-risk districts/communities identified	No	No	Yes
	High-risk plan for disadvantaged communities	No plan	Plan	Plan
New vaccines	Percentage PCV coverage (or coverage for other new antigens)	52%	80%	82%
6. SURVEILLANCE & REPORTING				
Routine surveillance	Percentage of surveillance reports received at national level from districts compared to number of reports expected (completeness)	75%	80%	95%
	AFP detection rate/100 000 population under 15 years-of-age	1.5	1.4	1
	Percentage suspected measles cases for which a laboratory test was conducted	50%	60%	70%
	Number of neonatal deaths for which a follow-up investigation was conducted	50	45	40
	Sentinel surveillance for rotavirus established	No	No	Yes
	Sentinel surveillance for meningitis (Hib/PCV) established	No	No	Yes
	Percentage of suspected meningitis cases tested for Hib/ pneumococcal disease according to standard protocol	50%	55%	60%

System components	Suggested indicators	RESULTS		
		2010	2011	2012
6. SURVEILLANCE & REPORTING cont'd...				
Coverage monitoring	Percentage gap in match between DTP3 survey coverage and officially reported figures	15%	-	-
Immunization safety	Percentage of districts that have been supplied with adequate (equal or more) numbers of AD syringes for all routine immunizations	-	-	50%
Adverse events	National AEFI system is active with a designated national committee	Yes	Yes	Yes
	Number of serious AEFI cases reported and investigated	3	3	2
7. DEMAND GENERATION AND COMMUNICATION				
Communication strategy	Availability of a routine immunization communication plan	No plan	Plan	Plan
Research	Year of last study on community knowledge, attitudes and practices in relation to immunization	No	Yes	No

*Note: The indicators used in this guide have been selected for convenience and simplicity. Countries should carefully decide which indicators to use from their own monitoring systems and national monitoring and evaluation frameworks. The national health sector monitoring and evaluation framework, the joint report form indicators (WHO/UNICEF) and the Global Framework for Immunization Monitoring and Surveillance and WHO-recommended standards for surveillance of selected vaccine-preventable diseases should be the main points of reference for selection of indicators.<sup>2</sup>*

## 2.1.4 Determining strengths and weaknesses, opportunities and threats

The analysis of the review in Tables 1A–1C may indicate areas where programme performance needs to be improved or system barriers need to be addressed. Highlighting or circling these indicators will help to determine priorities for the comprehensive multi-year plan.

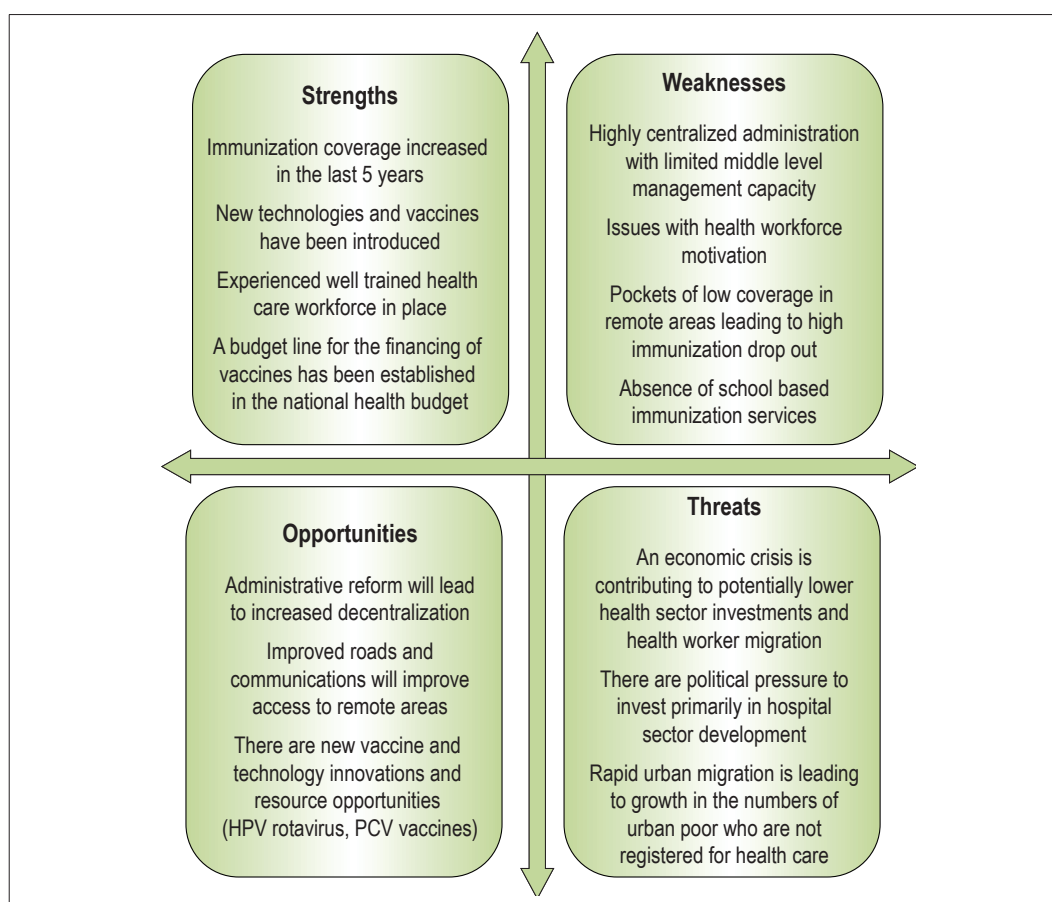
*Strengths and weaknesses* of the immunization programme should be debated, defined and documented. It is important to establish the link with the previous cMYP and the National Health Sector Plan, and include a brief evaluation of the activities, achievements and drawbacks in the previous planning period. This analysis of strengths and weaknesses can be undertaken by immunization system component.

<sup>2</sup> Main references: WHO Global Framework for Immunization Monitoring and Surveillance ([http://whqlibdoc.who.int/hq/2007/WHO\\_IVB\\_07.06\\_eng.pdf](http://whqlibdoc.who.int/hq/2007/WHO_IVB_07.06_eng.pdf)) and WHO Recommended standards for surveillance of selected vaccine-preventable diseases ([www.who.int/vaccines-documents/DocsPDF06/843.pdf](http://www.who.int/vaccines-documents/DocsPDF06/843.pdf)).

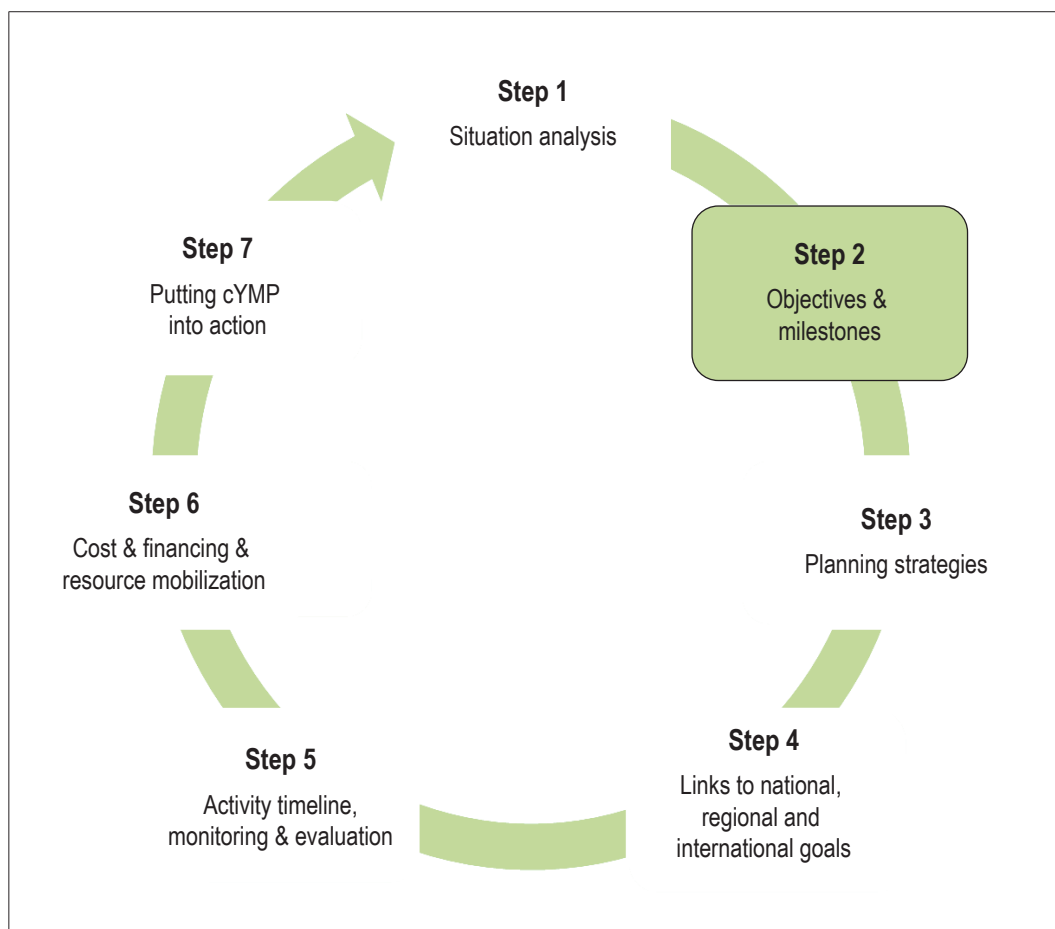
*Opportunities and threats:* Opportunities can also be identified by system component. Identifying opportunities is a means by which managers can identify innovations as well as build on existing successes for the next cycle of cMYP planning. Examples of opportunities include initiatives in health-sector reform which will result in more equitable distribution of primary care staff, or opportunities for new vaccine and technology introduction afforded by new national or international investments in immunization. At the same time, the various main threats to achievement of priority programme actions and outcomes should be identified. These threats can be classified as “internal”, insofar as the threats are completely within the control of the immunization or health-system programme management. An example of internal threat is the threat to programme performance resulting from inattention to micro-planning processes by primary-care providers. The threats can also be classified as “external” insofar as these threats are outside the direct line of decision-making control of immunization service managers or health workers. Examples of external threats include health-worker migration or internal conflict. The purpose of identifying these external threats is to inform management and health workers of the measures by which these threats can be mitigated (even if they cannot be completely removed through management decision-making).

Figure 7 below illustrates one way in which the strengths, weaknesses, opportunities and threats framework can be applied for the purposes of informing the situation analysis and identifying priority objectives (Step 2) and strategies (Step 3).

**Figure 7: Strengths, weaknesses, opportunities and threats (SWOT analysis)**



## Step 2: Developing and prioritizing national objectives and milestones



### 2.2.1 Goals, objectives and milestones

*The aim of this Step is to develop national goals, objectives and milestones, and to prioritize these objectives and milestones based on the evidence from the situation analysis.*

An analysis of the programme's strengths and weaknesses follows on from the results of the situation analysis and links to identification of a set of objectives for the NIP. The development of national objectives and milestones needs to ensure consistency with the situation analysis, previous evaluations and assessments of the immunization programme, and also with global and regional commitments. The objectives and milestones should be based on the strengths of the programme and, as previously mentioned, the weaknesses that emerged from the situation analysis. They should address the challenges identified, such as increasing coverage, reaching the hard-to-reach, introducing new vaccines, renewing the cold-chain and improving budgeting and budget execution etc.

The notes below provide some main planning definitions, which are elaborated in the summary planning template in **Annex 8a** and for which an example is provided in **Annex 8b**.

## 2.2.2 Setting priorities

### Planning notes – Planning definitions

Goals relate to reductions in morbidity and mortality, should be measured by impact indicators and should link to national health plan goals (e.g. under-five mortality reduction), regional targets and GVAP goals.

Objectives relate to programme coverage, and should be measured by programme outcome indicators (e.g. percentage DTP3 coverage) or programme output indicators e.g. (e.g. percentage posts filled, percentage vaccines nationally funded). Objectives will describe how the goal will be achieved.

Milestones describe the shorter term and concrete steps to be undertaken towards achieving the longer-term objectives of the programme. Collectively, milestones and disease-control targets should be monitored using an agreed monitoring and evaluation framework (see below).

Strategies should demonstrate how objectives will be achieved and, where possible, be linked to broader health-sector strategies in order to create synergies and efficiencies, and support resource mobilization for immunization.

Criteria need to be agreed upon in order to rank and prioritize health interventions. Criteria commonly applied include: health impacts (reductions in morbidity and mortality); strategic value; efficiency, equity and feasibility.

**Health and development impacts:** The most direct priority criterion is evidence of health impacts; the reduction of child morbidity and mortality – cMYP objectives, strategies and milestones should all be based on this evidence. In prioritizing, it is important to assess whether the chosen objectives, milestones and strategies should provide the most benefit to the population, given the proposed investment (cost). The benefit of increasing vaccination coverage is the social and economic value of reductions in preventable morbidity, disability and mortality.

**Links to national health plan values, priorities and strategies:** When considering priorities, it is helpful to refer to the national health sector plan and to the national development plan. These overarching plans identify the government's core values, development goals and operating principles. They guide social-sector planners in setting their respective priorities. These overarching values or principles could include, for example, equity, civil society development, decentralization, poverty alleviation, efficiency etc. All immunization plans and advocacy strategies should mirror these national values and strategies. Doing so will increase the probability that the national programme will receive the public resources needed for implementation.

**Promoting efficiency:** Planning priorities can be assessed according to the extent to which interventions represent “value for money”. Every immunization programme should strive to minimize the cost per fully immunized child. Choices will still need to be made between various immunization interventions. Costing and financing analysis will produce additional evidence for prioritizing objectives by assessing their demonstrated efficiency.

**Promoting equity:** Planning priorities can also be assessed on the extent to which a programme aims to narrow immunization coverage gaps between various population subgroups. The gaps could be between socio-economic groups or ethnic groups, or between populations in different geographic regions. Narrowing gaps by reaching every community would be a high priority in most settings, given that equity is often a higher level sector and development goal.

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**Feasibility:** Where there are large funding gaps, managers may need to re-evaluate whether strategies could be postponed or changed. Decisions need to be reached on the capacity of institutions and agencies to implement a programme over a given period of time. This capacity may relate to human resource numbers, resource mobilization or level of organizational development.

**Planning notes – suggestions for criteria for setting health priorities**

- **Impact:** What is the probability of impact of the proposed interventions on health?
- **Strategic value:** To what extent are the proposed interventions supportive of national health sector, regional and GVAP development values, goals and strategies?
- **Equity:** How will the proposed interventions reduce gaps in coverage between different population groups?
- **Efficiency:** To what extent do the proposed interventions represent value for money, in terms of achieving public-health impacts for the lowest cost?
- **Feasibility:** To what extent is there institutional and financial capacity to implement?

*When setting national objectives, strategies and priorities, the situation analysis by immunization component (see table 1C) and GVAP objectives and targets should be taken into careful consideration (see Annex 4 below).*

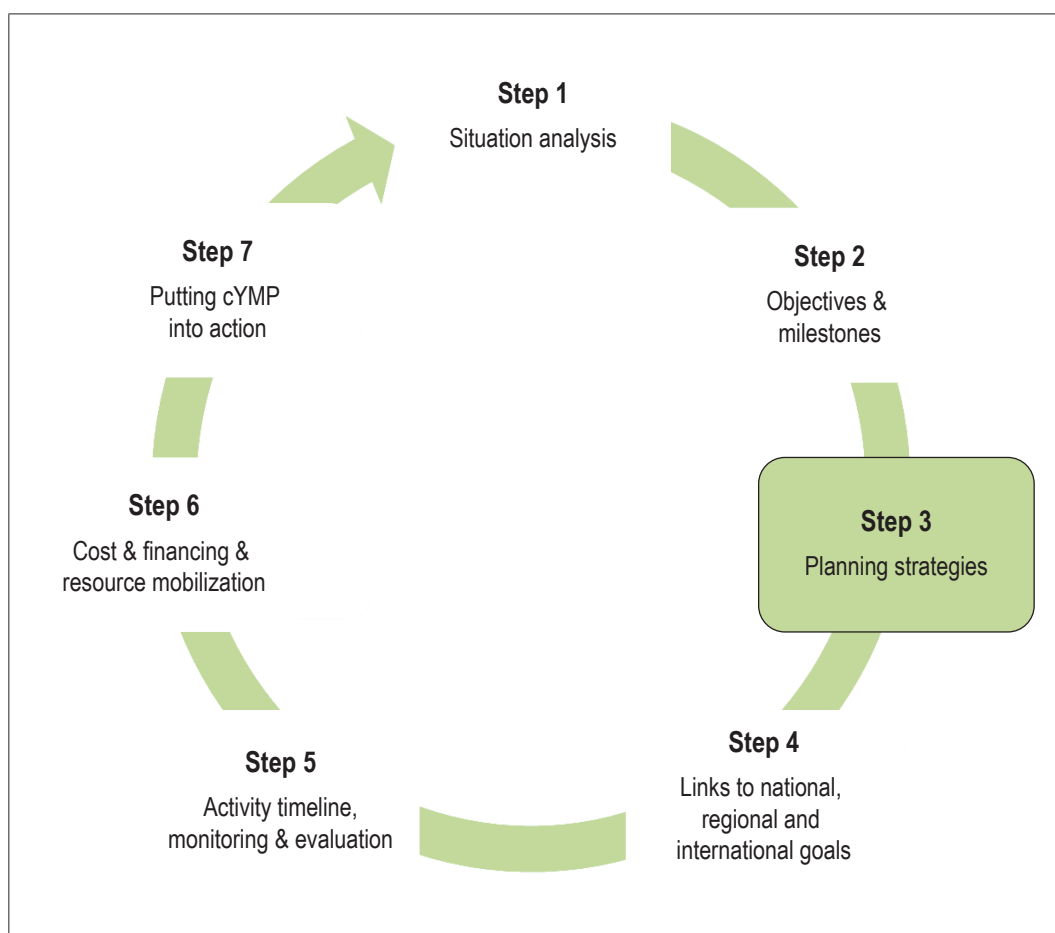
Table 2 below shows an example of priority setting for the immunization services component.

**Important Note:** From this point on in the Guidelines the example of the **immunization services** will be adopted to illustrate the remaining six steps of the planning process. Using these same steps and the information generated through the situation analysis in tables 1A to 1C, in addition to reference to the GVAP checklist, it will be possible to develop the essential components of the cMYP.

**Table 2: National objectives and milestones, and priorities**  
(sample table only)

Immunization services	Current performance	Objectives	Milestones	Order of priority
<b>Immunization services</b>				
Immunization coverage	Coverage increased from 72% in 2010 to 79% in 2012	90% DTP3 coverage in every district by 2018	<b>2015:</b> 50% of districts achieve DTP3 coverage of $\geq 80\%$	1
Immunization demand	Percentage drop-out DTP1-DTP3 has declined by 3% since 2010, and BCG-MCV1 drop-out has declined by 5% in the same period, but both are still above the recommended range of less than 10%	To reduce DTP1-DTP3 and BCG-MCV1 drop-out to less than 10% in all districts by 2018	<b>2015:</b> 50% of districts achieve DTP3 and MCV1 coverage of $\geq 80\%$	1
Immunization equity	The percentage gap between highest and lowest socio-economic quintiles remains at 30%	To reduce the percentage gap in DTP3 between highest and lowest socio-economic quintiles to 20% by 2018	<b>2018:</b> To reduce the percentage gap in DTP3 between highest and lowest socio-economic quintiles to 20% by 2018	1
New vaccines introduction	Documentation of increasing incidence of cervical cancer as documented in routine health information reports	>90% coverage of HPV vaccine for 14-year-old girls by 2018	<b>2015:</b> National coverage of HPV vaccine of 60% for girls aged 14 by 2015	2

### Step 3: Planning strategies for each system component



Having decided upon the objectives, milestones and priorities, *the aim of this Step is to determine appropriate strategies and key activities to achieve the objectives.* The strategies will determine how the objectives and milestones will be achieved.

When considering strategies for each immunization system component (listed below), it is helpful to refer to the most recent situation analysis that was conducted, and to consider how the strategies here link to health-system building blocks and broader health-sector strategy (see Figure 2). The closer these strategies are aligned with health-sector strategy (and updated, as necessary), the greater the prospects are that immunization strategies will be supported and sustained through policy and financial commitment.

- 1) Immunization services delivery.
- 2) Programme management.
- 3) Human resource management.
- 4) Costing and financing.
- 5) Vaccine, cold-chain and logistics.
- 6) Surveillance and reporting.
- 7) Demand generation, communication and advocacy.

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### Planning notes – deciding on strategic areas for the cMYP

One of the main challenges in strategic planning is deciding on the structure of the plan, i.e. what are the main strategic areas of the plan? This will depend on the main priorities established from the situation analysis. Options for deciding on strategic areas include the following.

- 1) Planning by immunization system component (as outlined in these Guidelines).
- 2) Planning by health sector strategic area.
- 3) Planning by strategic area of Global Vaccines Action Plan.
- 4) Other approaches based on situation analysis.

In these Guidelines, planning samples are organized according to immunization system components, as outlined in Figure 2.

### *Component 1: Immunization services*

Table 3 below provides an illustration of the development of strategies and activities for the immunization services component of the immunization system. To prepare Table 3, do the following.

- 1) List the main programme component from tables 1A to 1C in the first column as appropriate for the immunization system component.
- 2) List all national objectives (take from Table 2) and include in the second column of Table 3.
- 3) Write a brief description of strategies needed to achieve these objectives according to the system component in the third column.
- 4) Write key activities for each strategy in the fourth column.

**Table 3: Strategies and activities**  
(example only)

Immunization services	Objectives	Strategies	Main activities
<b>Immunization services</b>			
Immunization coverage	90% Pentavalent 3 coverage in every district by 2018	Implement “Reaching Every Community” Strategy in every district	Develop a list of high-risk communities and collaborate with local authorities to ensure all households are registered for health and immunization services.
Immunization demand	To reduce DTP1-DTP3 and BCG-MCV1 drop-out to less than 10% in all Districts by 2018		Conduct micro-planning workshops in 100% of identified high-risk communities.
Immunization equity	To reduce the percentage gap in DTP3 between highest and lowest socio-economic quintiles to 20% by 2018		Implement and monitor plan to reach all areas at least four times a year.
New vaccines introduction	>90% coverage of HPV vaccine for 14- year-old girls by 2018	Introduction of HPV vaccine through school-based programmes into the national schedule by 2015	Provision of HPV vaccine to all females through school programmes at age 12 to 13 years.
			Implement a HPV immunization catch-up programme for all young girls aged 15–18 and extend cervical cancer screening to 100% of districts by 2018.
			Establish a national HPV register to collect data to evaluate the impact of the HPV vaccination programme on rates of HPV-related cancers, and to issue reminders and follow-up system for incomplete vaccination.

***Important Note:*** The lists of strategies and activities are not exhaustive and the tables are not complete. Each country may wish to add more and different activities according to the real situation in their countries. For a list of suggested additional strategies and activities, please refer to **Annex 4 (GVAP strategies and activities)** and to **Annex 9 (Activity timeline)**. Examples of planning areas, by immunization system component, are described below.

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## ***Component 2: Programme management***

Programme management objectives can be framed according to the following suggested areas: (1) political commitment and advocacy; (2) policy; (3) legislation; (4) regulation; (5) standard operating procedures and guidelines; (6) private sector and civil society partnerships; (7) monitoring and evaluation plan. Refer to strategic objective 1 of **GVAP (Annex 4)** for more details on strategies and activities. Leadership functions, of resource mobilization and supervision, may also be included here, but are also referred to in other strategic areas.

## ***Component 3: Human resource management***

Human resource planners commonly set objectives in the following defined areas: (1) staff production and mix; (2) staff placement and retention; (3) human resource development; (4) health workforce motivation; (5) human resource management. Refer to strategic objective 4 of **GVAP (Annex 4)** for more details on strategies and activities. Reference should also be made to the health-sector plan or human resource master plan in order to link with the broader human resource strategy of the sector.

## ***Component 4: Costing and financing***

Financial planners commonly set objectives in the following defined areas: (1) financing and resource mobilization; (2) efficiency; (3) sustainability; (4) financial management; (5) external resources management; (6) procurement. Refer to strategic objective 5 of **GVAP (Annex 4)** as well as Step 6 of these Guidelines (costing and financing) for more details on strategies and activities. Reference should also be made to the health-sector plan to link with the broader health-sector financing and resource mobilization strategy.

## ***Component 5: Vaccines, cold-chain and logistics***

Logistics planners may elect to frame objectives according to: (1) vaccine management; (2) cold-chain systems; (3) transport and infrastructure; (4) injection safety and waste management. For more details on framing objectives and activities, planners should refer to the nine global criteria for effective vaccine management.<sup>3</sup> These areas include the following: (a) vaccine arrival procedures; (b) vaccine storage temperatures; (c) cold and dry storage capacity; (d) buildings, equipment and transport; (e) maintenance; (f) stock management; (g) effective distribution; (h) good vaccine management practices; (i) information systems and supportive management. References should also be made to the health-sector plan to link with wider strategy on logistics management, particularly in relation to transport, waste management, logistics information systems and maintenance systems and procedures. Refer to strategic objective 4 of **GVAP (Annex 4)** for more on strategies and activities.

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<sup>3</sup> WHO/UNICEF Effective Vaccine Management Initiative ([http://www.who.int/immunization\\_delivery/systems\\_policy/EVM-background.pdf](http://www.who.int/immunization_delivery/systems_policy/EVM-background.pdf)).

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### *Component 6: Monitoring, surveillance and reporting*

Due to the setting of disease elimination targets and the introduction of new vaccines, monitoring, surveillance and reporting have taken on increasing importance in immunization programming in recent years. Careful reference may also be required for the situation analysis of monitoring, surveillance and reporting, before setting objectives (Table 3, Step 1). The WHO global standards on vaccine-preventable disease surveillance should also be referred to in developing this area of the plan.<sup>4</sup> Suggested areas for objective and strategy setting include the following: (1) routine reporting; (2) routine surveillance; (3) new vaccines; introduction surveillance, including sentinel surveillance (4) immunization data quality self-assessment (DQS); (5) immunization safety (AEFI systems); (6) research (operational research, coverage surveys, social research, sero-surveys); (7) active monitoring and management response for low coverage areas of the country. For more details on immunization services objectives and strategies, please refer to strategic objective 3 of **GVAP (Annex 4)**.

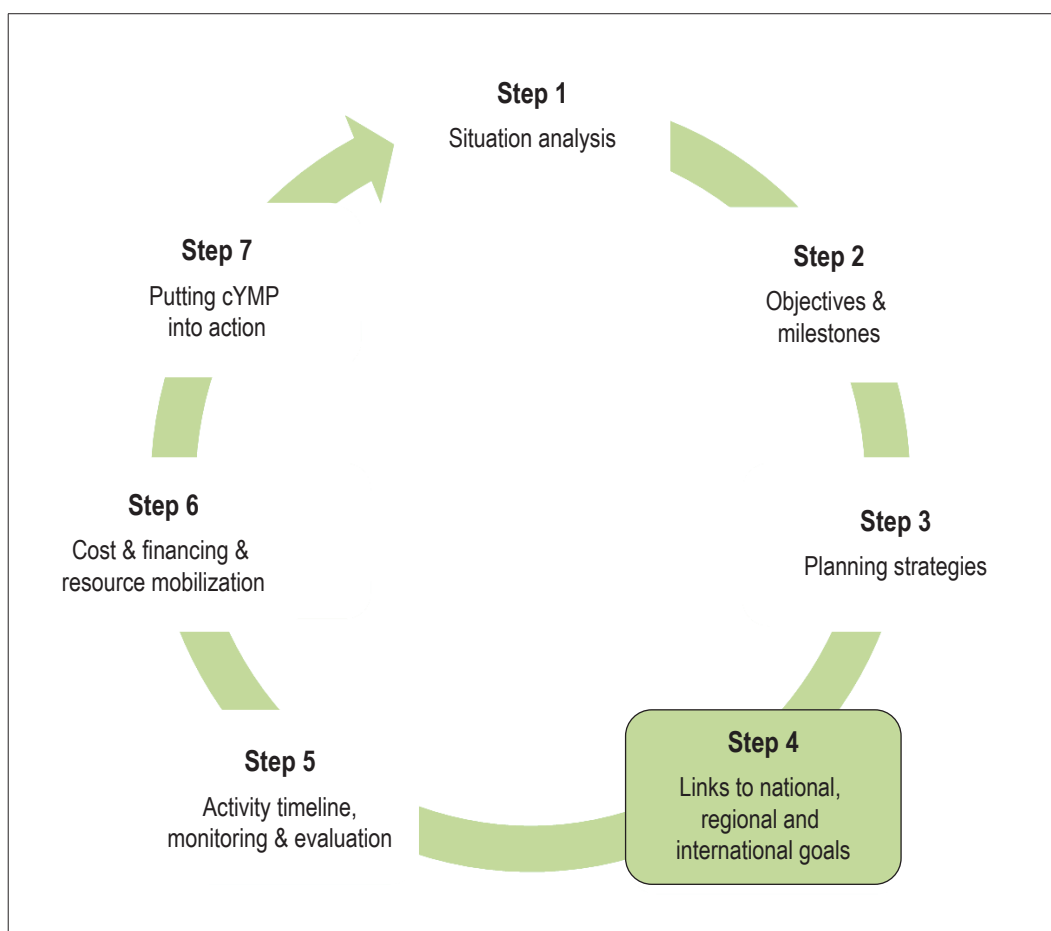
### *Component 7: Demand generation and communication (sample table)*

Due to the GVAP emphasis on individuals and communities understanding the value of vaccines and of their right to access to immunization and health services, more emphasis will be placed in future immunization planning on demand generation and communication. Careful reference will be required to the situation analysis (Table 3, Step 1) in the setting of communication objectives. Suggested areas for objective and strategy-setting include the following: (1) communication strategy; (2) health education material and media; (3) education system linkages; (4) incentives/motivational strategies for individual and communities; (5) capacity-building of health workers for communication; (6) social research to identify barriers and opportunities for expanding access; (7) community, private sector and civil society organization (CSO) partnerships. For more details on communication objectives and strategies, please refer to strategic objective 2 of **GVAP (Annex 4)**.

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<sup>4</sup> WHO Recommended standards for surveillance of selected vaccine-preventable diseases. Geneva, World Health Organization ([www.who.int/vaccines-documents/DocsPDF06/843.pdf](http://www.who.int/vaccines-documents/DocsPDF06/843.pdf)).

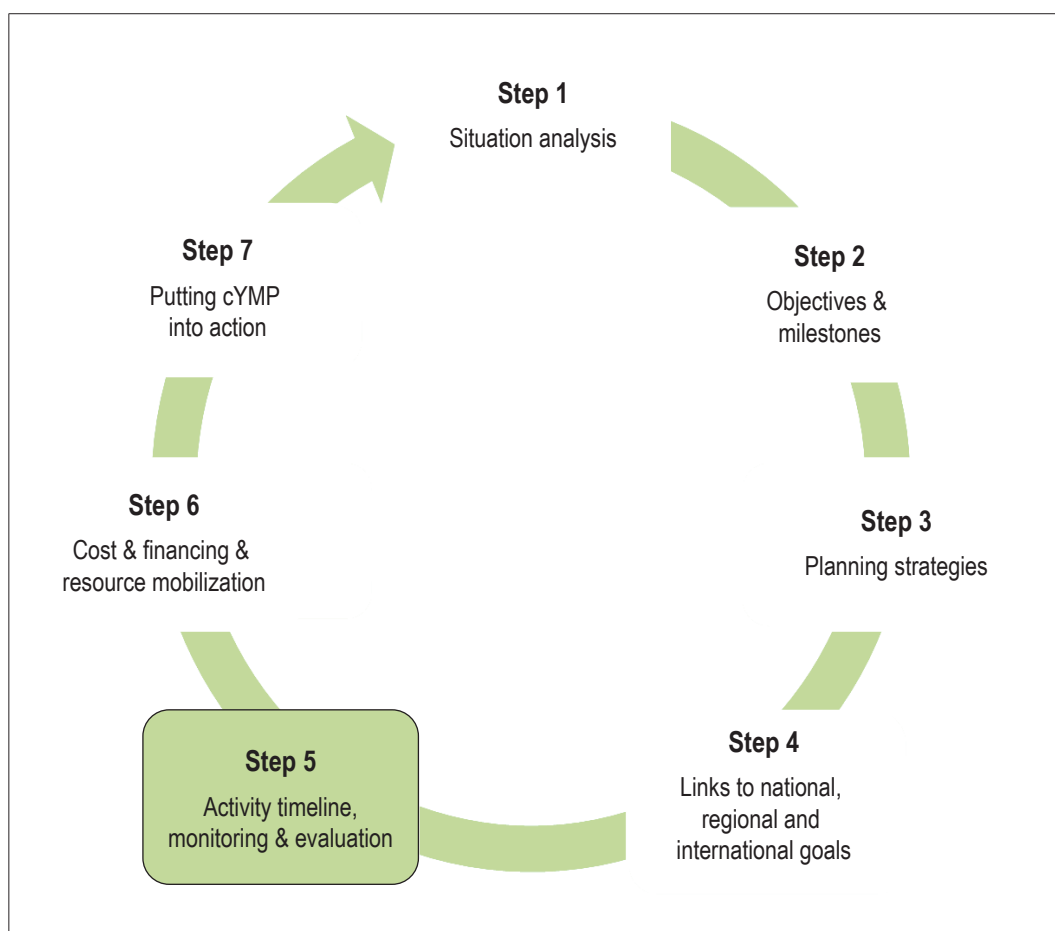
## Step 4: Aligning the cMYP with GVAP, regional targets and health- sector strategy



*The aim of this Step is to compare and check national immunization activities against those outlined in the GVAP document, regional targets and national health-sector strategy. This will enable stronger alignment with national, regional and global strategies for immunization and health-system strengthening. There may also be strategies that may have been overlooked in the initial stages of developing the cMYP, so this step is a way to check on the quality and alignment of the plan before proceeding to more detailed steps of activity timelines, M&E and costing and financing. The GVAP strategic objectives and activities are provided in the checklist in **Annex 4**. Columns 1 and 2 provide the strategies and key activities listed in the GVAP document. For each GVAP activity listed in column 2, you can indicate whether any modifications need to be made to your national plan by ticking “Yes”, “No” or “Not applicable”, or “New activity needed”.*

*Regional goals and targets, particularly for disease elimination and control, should be checked to see if there is close alignment with the cMYP. The last *National Health Sector Plan* or *Health Sector Review* can also be checked in order to determine which health-sector strategies have been overlooked, or which immunization strategies could be more closely aligned with health-sector strategy. Preferably, cMYP M&E indicators should be aligned where possible with the national health sector M&E framework.*

## Step 5: Creating an activity timeline and national monitoring and evaluation framework



*The aim of this Step is to create a timeline for the key activities and establish a national monitoring and evaluation framework for immunization.*

### 2.5.1 Timelines for the cMYP

All main activities from Table 3 can be listed so as to decide in which year(s) each main activity will be carried out. It is important to consider that only the main activities should be included here, as detailed activities can be included in the annual operational plans. At this stage, it is necessary to involve staff from the sub-national (province or state) level in order to review the draft cMYP.

Table 4 below provides an example of an activity timeline for the immunization services component. For a more detailed example, please refer to **Annex 9** for an example of a detailed activity timeline covering all immunization components.

**Table 4: Constructing an activity timeline – immunization services component**  
(example only)

Immunization services	Objectives	Strategies	Activities	Timeline				
Immunization services				2013	2014	2015	2016	2017
Immunization coverage	90% DTP3 coverage in every district by 2018	Implement Reaching Every Community Strategy in every district	Develop a list of high- risk communities and collaborate with local authorities to ensure all households are registered for health services.	X	X	X	X	X
Immunization demand	To reduce DTP1-DTP3 & BCG-MCV1 drop-out to less than 10% in all districts by 2018		Conduct micro-planning workshops in 100% of identified high-risk communities.	X	X			
Immunization equity	To reduce the percentage gap in DTP3 between highest and lowest socio-economic quintiles to 20% by 2018		Implement and monitor plan to reach all areas at least four times a year.	X	X	X	X	X
New vaccines introduction	>90% coverage of HPV vaccine for 14-year-old girls by 2018	Introduction of HPV vaccine through school-based programmes into the national schedule by 2017	Provision of HPV vaccine to all females through school programmes at age 12 to 13 years.					X
			Implement a HPV catch-up programme for all young girls aged 15–18 and extend cervical cancer screening to 100% of districts by 2018.					X
			Establish a national HPV register to collect data to evaluate the impact of the HPV programme on rates of HPV-related cancers, and to issue reminders and follow-up system for incomplete vaccination.					X

## 2.5.2 National monitoring and evaluation framework for immunization

A national monitoring and evaluation framework enables tracking of progress towards the goals and objectives of the cMYP. It ensures that the cMYP is a live document by enabling annual and mid-term corrections to cMYP strategies, should this tracking demonstrate that milestones and targets are not being achieved.

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A national monitoring and evaluation framework should demonstrate clear linkages in a results chain that extends from main inputs and activities to system outputs, to coverage outcomes and, finally, to health impacts. The logical framework for health systems strengthening<sup>5</sup> from WHO demonstrates these logical linkages in the results chain, and can be adapted for any programme, including immunization. As well as promoting links in the results chain, taking such a logical framework perspective also enables closer matching of immunization M&E frameworks with broader health sector and development frameworks (see Figure 8).

**Inputs and activities** may refer to the investments in the programme, including financial or human resources and capital investments or major activities conducted, such as health outreach programmes or immunization campaigns. Inputs or process indicators measure whether planned activities have been implemented and planned resource commitments have been made.

**Systems outputs** are results that are intermediate between these inputs and coverage outcomes. These may refer to the level of immunization or health system readiness to deliver services, or capacity to respond to demand for services. Such immunization or health system outputs could include functionality of cold-chain systems, availability of primary health-care services according to a set health system standard, or the level of stockout of vaccines. The output level of the M&E logical framework reflects health system and immunization system readiness to supply quality services. Output level indicators are intended to measure the principal strategies by which the objectives of the cMYP will be achieved. Service readiness, especially in terms of systems developments, such as functioning cold-chain or introduction of micro-planning systems, would be two examples of system strategies to achieve cMYP objectives.

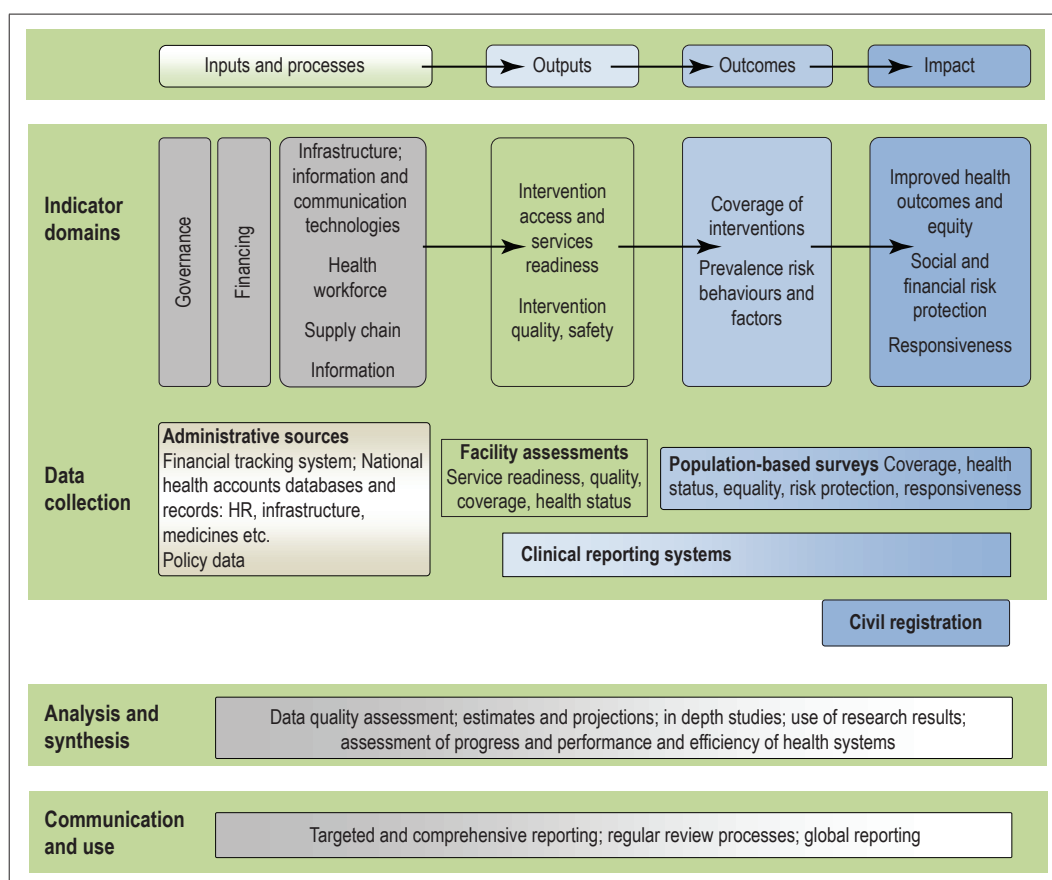
**Immunization outcomes** are results that demonstrate the level of programme reach or coverage, as reflected in immunization coverage rates, drop-out rates, or indicators of immunization equity. Outcome indicators are intended to measure the objectives of the cMYP.

**Immunization impact** is the final level of the results chain, and demonstrates the overall results for the programme in terms of morbidity, disability and mortality reductions, and reduced incidence of vaccine-preventable diseases. Impact indicators should measure the attainment of the overall goals of the cMYP.

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<sup>5</sup> WHO Monitoring and evaluation of health systems strengthening. Geneva, World Health Organization, 2010 ([http://www.who.int/healthinfo/HSS\\_MandE\\_framework\\_Oct\\_2010.pdf](http://www.who.int/healthinfo/HSS_MandE_framework_Oct_2010.pdf)).

**Figure 8: WHO monitoring and evaluation framework**



The main points to consider in the construction of a national monitoring and evaluation framework are the following:

- 1) **SMART INDICATORS.** Ensure indicators are SMART (specific, measurable, achievable, relevant and time bound).
- 2) **ALIGNMENT.** Ensure, where possible, that indicators correspond to indicators described in the national M&E framework for the health sector, as well as to global (GVAP) and regional targets for immunization.
- 3) **RELIABLE DATA SOURCES.** Specify in the M&E framework and plan the data sources and the means by which the data will be verified.
- 4) **ACCURATE BASELINES.** Describe accurate baselines that enable tracking of progress.
- 5) **ACHIEVABLE TARGETS.** Describe targets that are realistic and achievable in relation to the baseline result.

Refer to **Annex 15** for more definitions of monitoring and evaluation terminology. Table 5 below illustrates a sample monitoring and evaluation framework for immunization. (Note: this is a selection of indicators only and does not demonstrate a complete framework).

Table 5: National immunization monitoring & evaluation framework

Goal	IMPACT INDICATORS	Baseline			Targets						
		Result	Year	Source	2013	2014	2015	2016	2017	2018	Means of verification
Immunization component – Immunization services											
Objective	Under 5 child mortality rate	130/ 100 000	1990	DHS			45/ 100 000				DHS survey 5 yearly
	OUTCOME INDICATORS	Baseline			Targets						
		Result	Year	Source	2013	2014	2015	2016	2017	2018	Means of verification
Immunization component – Immunization services											
Strategies	% gap in DTP3 between highest and lowest socio economic quintiles	30%	2010	DHS				25%			DHS planned 2015
	OUTPUT INDICATORS	Baseline			Targets						
		Result	Year	Source	2013	2014	2015	2016	2017	2018	Means of verification
Immunization component – Immunization services											
Inputs & Activities	Implement reaching every community strategy in every district	0	2012	Programme records	25	20	15	10	5	3	Guidelines and policies
	INPUT INDICATORS	Baseline			Targets						
		Result	Year	Source	2013	2014	2015	2016	2017	2018	Means of verification
Immunization component – Immunization services											
Design reaching every community strategy and guidelines	Specific TA budget and resources mobilised for REC strategy	0	2012	Programme records	25	20	15	10	5	3	Programme records

### 2.5.3 National monitoring and evaluation strategy and plan

Not all information necessary to track progress of the cMYP and annual and sub-national plans can be monitored through national health information systems. Information may need to be generated through supportive supervision field assessments or through research studies. For example, knowledge, attitude and practice (KAP) studies may be required in order to better understand barriers to access for specific high-risk groups. Larger population-based surveys (such as coverage surveys or demographic and health surveys) may be required to ascertain coverage levels, reasons for non-immunized status, gender barriers to immunization and disaggregation of data according to location, sex, socio-economic quintile and education level. Mid-term and end of cMYP evaluation should be considered in order to develop mid-course corrections to the plan, and to inform the development of the subsequent cMYP.

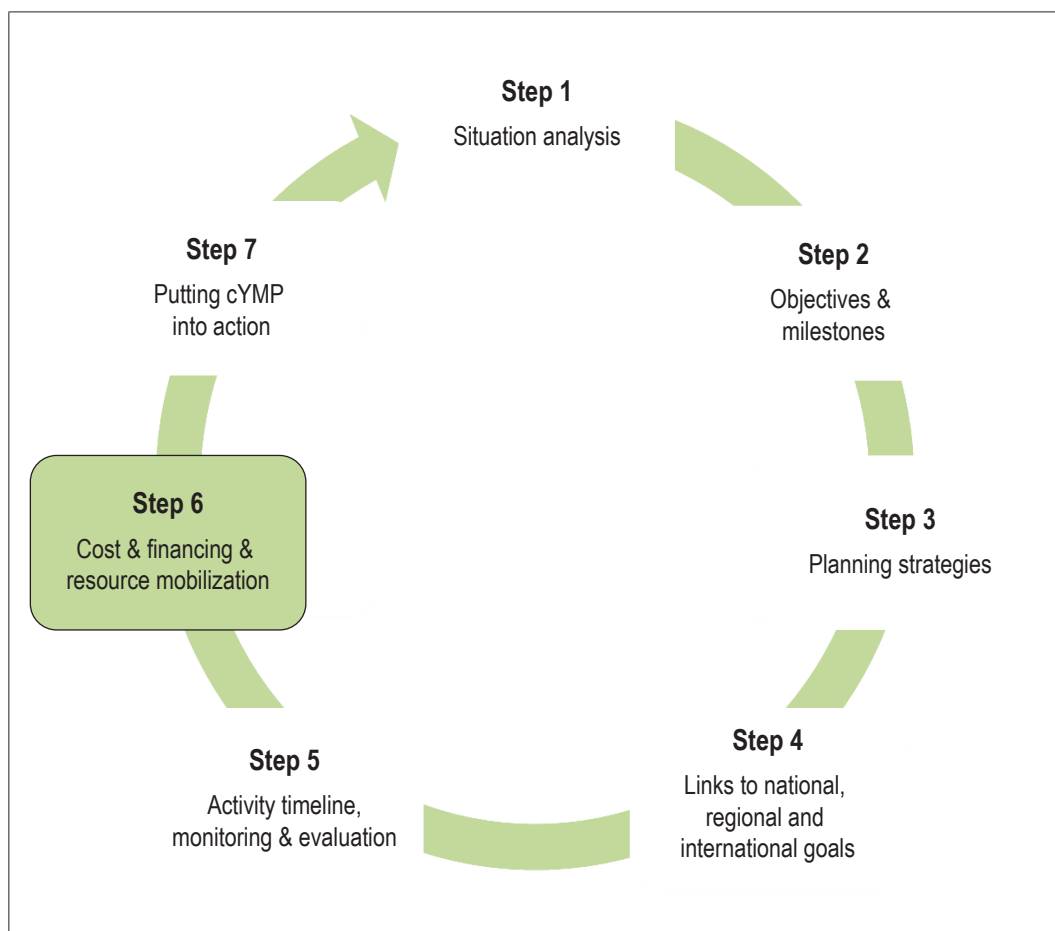
It will be important to document in the programme management system component of the cMYP the main strategies by which the national programme and sub-national levels will monitor progress towards achievement of immunization objectives, targets and milestones, and will evaluate the extent to which these goals have been achieved, or corrections that may be needed.

Refer to the planning notes below, which document some main content areas of monitoring and evaluation frameworks and strategy (additional to the surveillance plan that should be documented in the subsequent steps).

#### **Planning notes – Main elements of a national monitoring and evaluation strategy or plan for immunization**

- A monitoring and evaluation framework which identifies main impact (mortality), outcome (programme coverage) and output (system or programme developments) and process (indicators of achievement) over the next plan period. The framework should also outline baseline measures and sources of data for the cMYP.
- Systems of planning review at national and sub-national level (sector review or immunization programme review) that tracks progress of the plan against the agreed monitoring and evaluation framework at national, district and community levels. This process should enable regular updating of the cMYP as an outcome of the annual review. This would also include regular reviews of surveillance and coverage performance using standardized protocols that assess clinical, laboratory and data management components of the surveillance and reporting systems.
- A supportive supervision plan that documents the terms of reference, frequency and procedures for systematic supervisory support for national immunization programming.
- An immunization research agenda that addresses information gaps for improving immunization performance. Potential content areas could include the following:
  - knowledge attitude and practice surveys;
  - post new vaccine introduction evaluations;
  - comprehensive EPI reviews;
  - health coverage surveys and data quality self-assessments;
  - enhanced vaccine and logistics management assessments;
  - rapid immunization system assessments in low coverage areas;
  - evaluations of AEFI surveillance systems, school health programmes, new technologies or other programme innovations;
  - social research studies on gender, or social barriers to immunization, or reasons for non-uptake of services by particular high-risk communities (urban poor communities or ethnic minorities for example);
  - mid-term and final evaluations of the cMYP.
- Description of national and global strategic linkages. Documentation of how the national frameworks for immunization strategically link to national health sector monitoring and evaluation frameworks, regional targets and the GVAP monitoring framework.

## Step 6: Analysing the costs, financing and financing gaps



The aim of this Step is to estimate the current and future cost and financing of the cMYP objectives, and to conduct scenarios and identify strategies that will improve the financial sustainability of the programme.

An Excel©-based tool and instruction manual have been developed for this analysis, which provides much more detailed guidance than described below. Countries that have completed an immunization financial sustainability plan (FSP) will be already familiar with the process of estimating costs and financing.

### 2.6.1 Health-sector analysis

It is essential to make a qualitative assessment of the environment in which an immunization programme operates in order to understand how the availability of resources and the patterns of service delivery might be affected in the future. For instance, the health sector competes with many other sectors for limited government resources. Within the health sector, the immunization programme competes with other priority health programmes for funding. By having a better sense of whether government financing for health is increasing or decreasing overall, the team preparing the cMYP can estimate the availability of future financing for immunization more reliably.

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In addition, many governments are pursuing strategies across all sectors, aimed at improving financial management and transparency of national planning and budgeting processes. New procedures and mechanisms can have an impact on the availability of immunization funding, because they provoke discussions and decisions about national priorities and funding.

Finally, reforms can affect the organization of the immunization programme, delivery of services and financing of the programme. It is important to possess adequate knowledge of the critical reforms that will have an impact on the programme.

### 2.6.2 Estimating costing and financing of the cMYP

Costing the cMYP is a key step in the planning process of the NIP and provides the key financial information to reach programme objectives. Immunization services can only realize their potential for improving the health of children with adequate and reliable funding. It is broadly recognized that strategic planning for immunization requires credible information about how much is being spent, on what and from what source, any funding gaps and how much will be needed in the future.

When costing the cMYP, the starting point is the information about programme objectives and strategies derived from previous steps in the development of your cMYP. These will be translated into projected future costs, based on assumptions about the inputs and activities required to achieve programme objectives and targets.

Costing will also help to estimate and analyse the gap between future resource requirements and available financing over the time horizon covered. The steps to follow include the following.

- 1) **Estimate current programme costs** by type of cost (such as personnel training, vaccines, operations and maintenance, etc.).
- 2) **Project future resource requirements** over the cMYP time horizon (up to five years).
- 3) **Estimate current programme financing** (both sources and amounts). Sources usually include national and sub-national government, GAVI, major donors, agencies and non-governmental organizations (NGOs).
- 4) **Project future financing levels and patterns** over the cMYP time horizon (up to five years).
- 5) **Estimate financing gaps** by comparing resource needs with available financing, conducting alternative scenarios to reduce funding gaps and identifying strategies for improving financial sustainability.

For generating estimates of future financing, it is suggested that the individuals preparing the cMYP hold discussions with representatives from the Ministry of Health, Ministry of Finance, Ministry of Planning, major donors, agencies and NGOs, to determine their future commitments to the programme. In countries where NGOs provide a substantial level of immunization services, it will be important, as far as possible, to estimate their future support for the programme.

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It may be difficult for national government and partners to make financing commitments for the later years of the projection period. Thus, some of the financing gap in later years will be related to uncertainty in projected financing. This issue can be resolved by ensuring that the cMYP is translated into annual plans and updated periodically over the time period covered in the cMYP.

In many countries, provinces or regions vary in terms of geography, population density and socio-economic levels. These differences at the sub-national level affect programme performance and the amount of resources required to achieve objectives. Furthermore, in countries with decentralized planning processes, revenue generation and resource allocation for programme operational costs are based at the sub-national level. For these reasons, it is useful to estimate resource requirements at the sub-national level, in addition to those at the national level. This is particularly important when planning strategies to reach the unreached or underserved. Information from sub-national and district level can be used to estimate varying resource requirements.

The instruction manual accompanying the Excel© tool provides additional guidance on estimating sub-national costs and finances.

### **2.6.3 Scenario-building for programme implementation and costing**

Scenarios evaluate the cost and financing of alternative ways of achieving programme objectives. The Excel© tool can be used to evaluate and compare alternatives in order to decide on the most feasible approach for the programme. Cost estimates for each scenario need to be based on assumptions about the inputs required to achieve targets.

For example, if a country is interested in reducing morbidity and mortality by introducing combination vaccines, it will be important to compare the additional resources required with available funding. In addition, the costs of alternative scenarios need to be compared against the original cost of achieving programme objectives to see whether any of the new scenarios provide cost savings or reduce funding gaps. Alternatives should be compared for their feasibility and affordability, while still considering possible additional benefits. Even if the programme is to receive GAVI grant funding, information on alternative scenarios can help prepare for when funding ends and government and partners take over responsibility for financing.

### **2.6.4 Interpreting cost, financing and gap results**

The results of the cost, financing and gap analysis can be further evaluated in order to obtain a comprehensive picture of financial sustainability prospects. For example, NIP strategies and activities can be considered affordable if the projected funding gap with government and partner financing is small enough that it can be realistically filled, taking into account constraints in financing the health sector. Drivers of programme costs can be identified to determine whether strategies can be made more efficient. For example, one of the more important cost drivers is vaccine cost. By reducing vaccine wastage, the NIP can reduce the overall resource requirements for vaccines.

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When evaluating alternative scenarios, such as introducing a new vaccine, it is important to associate these costs with the benefits of the programme improvements being considered. The benefits of immunization programmes over the five years of the cMYP include: number and percentage of target population vaccinated; disease cases prevented, and lives saved from vaccine-preventable diseases.

Additional disease cases and deaths will be prevented as programme improvements are introduced. For example, if routine coverage for measles is increased, fewer children will contract the disease and fewer measles deaths will occur. In addition, with the introduction of underutilized vaccines, such as hepatitis B, there will be a reduction in the number of hepatitis B cases and associated deaths will decline.

The numbers of disease cases prevented through vaccinations differ by type of vaccine due to variation in vaccine efficacy, as well as the age-specific incidence of diseases. When information on number of disease cases and deaths averted is available, the programme managers and policy-makers can estimate the relative cost-effectiveness of programme improvements. The cMYP Excel© tool does not yet calculate the benefits associated with a new vaccine or programme improvement.

## 2.6.5 Developing financial sustainability strategies

If a large financing gap exists for a programme, it will be important to identify how this can be reduced to improve financial sustainability.

*Although self-sufficiency is the ultimate goal, in the nearer term sustainable financing is the ability of a country to mobilize and efficiently use domestic and supplementary external resources on a reliable basis to achieve current and future target levels of immunization performance in terms of access, utilization, quality, safety and equity.*

This definition<sup>6</sup> emphasizes the partnership between country and partner contributions to the programme, as well as the need to improve reliability and efficiency of programmes.

Strategies for achieving greater financial sustainability need to be tailored to a country's situation, but will probably include efforts to:

- mobilize additional resources from national and external sources;
- increase the reliability of resource availability;
- improve programme efficiency to minimize additional resources needed.

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<sup>6</sup> Milstien JB et al. The GAVI Financing Task Force: one model of partner collaboration. Vaccine, 2008, 26:6699–6705 ([http://www.who.int/immunization\\_financing/analysis/JVAC8327\\_Milstien\\_J.pdf](http://www.who.int/immunization_financing/analysis/JVAC8327_Milstien_J.pdf)).

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It is important to include key stakeholders in the assessment and selection of financial sustainability strategies. Engagement of stakeholders in the process can be an important way of identifying new ideas and supporting implementation of strategies.

The cMYP needs to include these strategies in the relevant tables, and the costs of implementing these studies also need to be evaluated.

The cMYP is a key instrument for programme and resource planning and for advocating among the Ministry of Health, Ministry of Finance, international donors and development partners to support programme expansion and improvement. Financial sustainability strategies can form the basis of advocacy for the programme. To be effective, advocacy must be rooted in the strategies that are developed to achieve the programme's financial sustainability objectives. In some cases, many of the stakeholders for the immunization programme will become target audiences for the advocacy messages. During the development of the cMYP there are many opportunities for formal and informal interaction with stakeholders.

A recommended reference for identifying financial sustainability strategies is [http://www.who.int/immunization\\_financing/options/en/](http://www.who.int/immunization_financing/options/en/). For further information on advocacy, see [http://www.gavinfo.org/docs\\_activities/advocacy/fs/](http://www.gavinfo.org/docs_activities/advocacy/fs/).

### 2.6.6 Financial sustainability indicators and targets

It is recommended that a small number of indicators and related targets be chosen for monitoring and evaluation of programme financial sustainability. Indicators and targets may be chosen to evaluate reliability, efficiency, adequacy and self-sufficiency.

A set of possible indicators is provided in **Annex 11**. Indicators from this list are suggested, but other indicators tailored to a country's specific situation could be chosen.

#### *Reliability*

Reliability means that financial resources allocated for the programme are available at the right time and place. Reliability can break down when budgetary allocations are made but funds are not released when needed. An indicator and target of reliability might be:

- *indicator* — the share of local government allocations for immunization that is expended;
- *target* — 90% or more of local government allocations for immunization programme inputs are expended during each of the first two years of the cMYP and 95% or more during each of the last three years.

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## *Efficiency*

Efficiency means that the maximum quantity of output is achieved for a given level of expenditure. An indicator and target of efficiency would be:

- *indicator* — vaccine wastage rate;
- *target* — the wastage rate is reduced by two percentage points per year to arrive at 10 percentage points lower, than in the base year, by the end of the cMYP.

## *Adequacy of resources*

Adequate resources means that efforts to mobilize financing from national and external sources are successful in obtaining the funding needed to achieve programme objectives. An indicator and target of adequacy of resources might be:

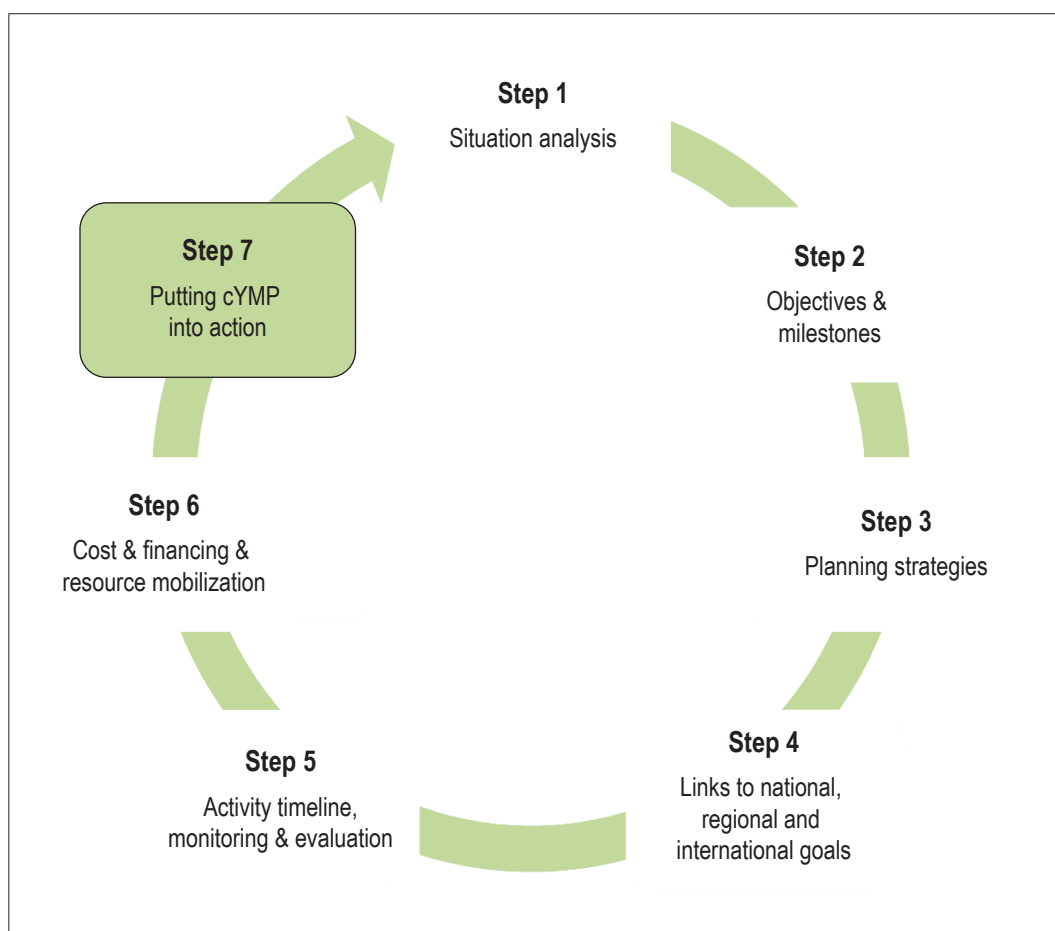
- *indicator* — sub-national government spending for per diems for outreach and for community mobilization activities;
- *target* — sub-national governments mobilize at least 90% of the funds planned for outreach and community mobilization in the first year of the cMYP.

## *Self-sufficiency*

Finally, the ultimate goal is financial self-sufficiency for the immunization programme. To move towards self-sufficiency as the programme expands and improves, national contributions to meeting programme costs would have to grow. Hence, an indicator of self-sufficiency could be:

- *indicator* — the growth rate of the national contribution to the resource requirement of the programme;
- *target* — MoH spending on immunizations is increased by 7% per year and sub-national government spending on immunizations by 5% per year over the life of the cMYP.

## Step 7: Putting the cMYP into action: approval, dissemination, implementation and monitoring



*By this Step, the development stage of the cMYP has been completed. The aim of the next step is to put the plan into action (dissemination, implementation and monitoring stages).*

Implementation stages are inclusive of the following, each of which is detailed below.

- 1) Dissemination.
- 2) Creating an annual plan.
- 3) Consolidating and integrating activities.
- 4) Prioritizing activities.
- 5) Linking to sub-national plans.
- 6) Monitoring and supervising plans.

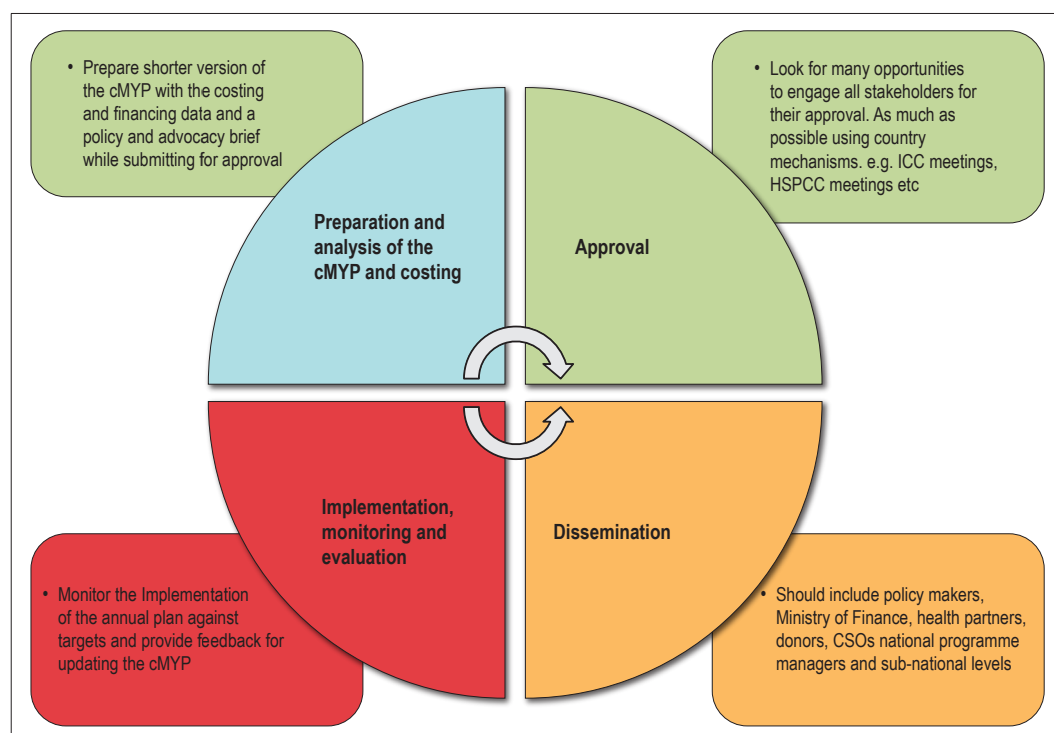
### 2.7.1 Dissemination

Once the multi-year plan is ready, it is important to ensure that the plan will be put into action. Steps that could be undertaken include the following.

- **Get approval/endorsement** from higher levels in the national structure.
- Ensure that main goals and targets are integrated into the **Health Sector Plan**.
- Consult with the **Ministry of Health and the Ministry of Finance** to ensure that the financing of the plan is integrated within multi-year funding commitments.
- Present and discuss the plan during its development and before finalization with the **ICC and partners**, and in broader health-sector forums such as a **Health Sector Steering Committee**. In certain contexts, convene meetings with **parliamentarians or political leaders** to engage their commitment to the immunization programme.
- **Disseminate the plan** to all sub-national levels and others involved in the planning process, including the above-mentioned stakeholder group.
- As part of a broader **advocacy and communications strategy**, establish public forums with participation from civil society, professional associations, academia, the private sector and the media, to disseminate the main goals and targets of the multi-year plan.

For the plan to be widely accepted, dissemination needs to be adequately planned. A variety of dissemination methods can be used, including a national conference with the above-mentioned main stakeholders, and the distribution of short accessible versions of the plan (See **Annex 8a and 8b**).

**Figure 9: Process of approval and dissemination of cMYP**



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### 2.7.2 Implementation — creating an annual plan

Every year, an activity plan or workplan should be prepared for the coming year. The annual plan should be developed with full involvement of the sub-national level, ideally at an annual review and planning meeting. It is always important that the development of the annual plan, as far as possible, be synchronized with the national planning process and involve key stakeholders in advance. In countries where an annual review process takes place at the sub-national level, the review of the national immunization programme and the cMYP should be integrated into the review process. One advantage of this integration is to broaden the discussions on the implementation of the cMYP.

If the cMYP is new, it is advisable to start the annual planning soon after the multi-year planning process, to ensure appropriate linkages with the cMYP.

For subsequent years, a situation analysis is required, and should be conducted as indicated in Step 1 and using the findings from there to revise the activities and make them more relevant. The situation analysis should also be updated utilizing the monitoring and evaluation framework, as described in Step 5. In particular, the indicators should be disaggregated to the lowest geographic level possible, in order to detect geographic and technically specific areas of underperformance for coverage and equity of access, surveillance, cold-chain or logistics, or any other technical component of the immunization system.

One way to do this is to develop a line list of district or line list of sub-district level performance, and categorize this performance against five or six priority indicators from the monitoring and evaluation framework.

This will guide the national and sub-national health system and programme planners to update annual workplans and reallocate resources based on the evidence of health and programme needs.

- 1) Conduct a situation analysis (*see Step 1*).
- 2) From the cMYP timeline (*Table 4*) copy all activities listed under the year in question and enter into *Table 5* (*see end of this section and also the cMYP costing and financing guidelines*).
- 3) Refer again to GVAP and updated regional and national sector targets every year. Consideration should also be given to development in health-sector plans and strategies, and also to findings from both research and evaluation activities and to the priorities set in the most recent national programme and health-sector review. Activities can then be adjusted according to national needs.

### 2.7.3 Integrating and consolidating activities for implementation

*The aim of integration* is to conduct joint activities between immunization and other health priorities. The national health plan may indicate which health interventions should be linked. The first step will usually be discussions between the groups that intend to work together. This may be followed by joint planning, and sharing of resources. Most countries have sub-national planning systems where activities can be jointly planned. Also, many countries have integrated service-delivery strategies,

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either through the network of primary care facilities or through delivery of packages of services through health outreach programmes.

*The aim of consolidation* is to identify common problems in the immunization system and to share responsibilities to carry out corrective activities. For example, an obstacle for polio eradication will often affect measles mortality reduction, neonatal tetanus elimination and routine immunization coverage, and various teams can contribute to solving the problem. Review all the key activities and decide which activities can be consolidated.

For example, you may decide to consolidate assessment of the status of districts, micro-planning workshops and district supervisory visits into one activity.

#### **2.7.4 Prioritizing activities for districts and communities**

In Step 2, we applied some criteria for setting priorities for objectives and strategies at the national level. It is also important to prioritize activities for specific geographic areas in order to address gaps in any of the immunization system components and, in particular, the immunization services component for health coverage. One approach is to analyse district and sub-district level data to select priority districts and priority communities.

**Annex 12** provides an example of an analysis using coverage and surveillance data for each district. This analysis will help to decide which districts need to be prioritized for time of implementation and/or allocation of resources. Indicate in the “where” column whether an activity will be carried out in all districts, or only in selected priority districts.

This approach will need to be replicated for the sub-district level when annual workplans are being developed at the district level. Coverage assessments and mapping will also need to be undertaken for sub-district administrative units and communities, to demonstrate areas of under-performance or low coverage. If additional resources are going to be needed to reach or prioritize underserved areas, then this should be discussed between the various levels during the planning process, to ensure that budget estimates reflect actual needs and that sufficient funds can be generated. This is particularly important for linking with national disease prevention and control targets, and for health equity objectives to reach every community.

Once the cMYP has been costed, the costing tool will show the total budget for each year. Using the budget for that year (taken from the costing tool), include costs for each activity in the annual plan.

- For certain activities (e.g. polio NIDs), the costing tool would contain detailed cost information that can be included directly in the cost column (resources required) of Table 6.
- For other activities, include an estimated cost, ensuring that the total costs of these planned activities do not exceed the ceiling allocated for that year.

Having decided on priority activities and districts, indicate timeline, and persons and units responsible.

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### 2.7.5 Annual planning and monitoring at sub-national levels

The national plan provides the broad parameters on which the country should base its immunization activities. The sub-national and district plans should include details on implementation, and should be linked strategically to both health sector and cMYP plans.

- **Provincial, regional or state-level immunization plans** should follow the process and structure of the annual national planning process. Linking to regional/provincial and district health plans, immunization plans should link effectively to the health-sector planning processes. Every opportunity should be taken to put the case for investment in immunization, and for more efficient use of scarce health resources through coordination of immunization services with other health interventions. Provincial and district health plans should adequately reflect the resource needs and priorities for immunization and related maternal and child health-care services.
- **Health facility micro-plans** should also contain detailed mapping and activities plus local problem-solving, monitoring and surveillance and response. There should be adequate documentation of high risk or unreached communities, in order to prioritize activities and resource allocation for reaching every community.

### 2.7.6 Planning and monitoring review

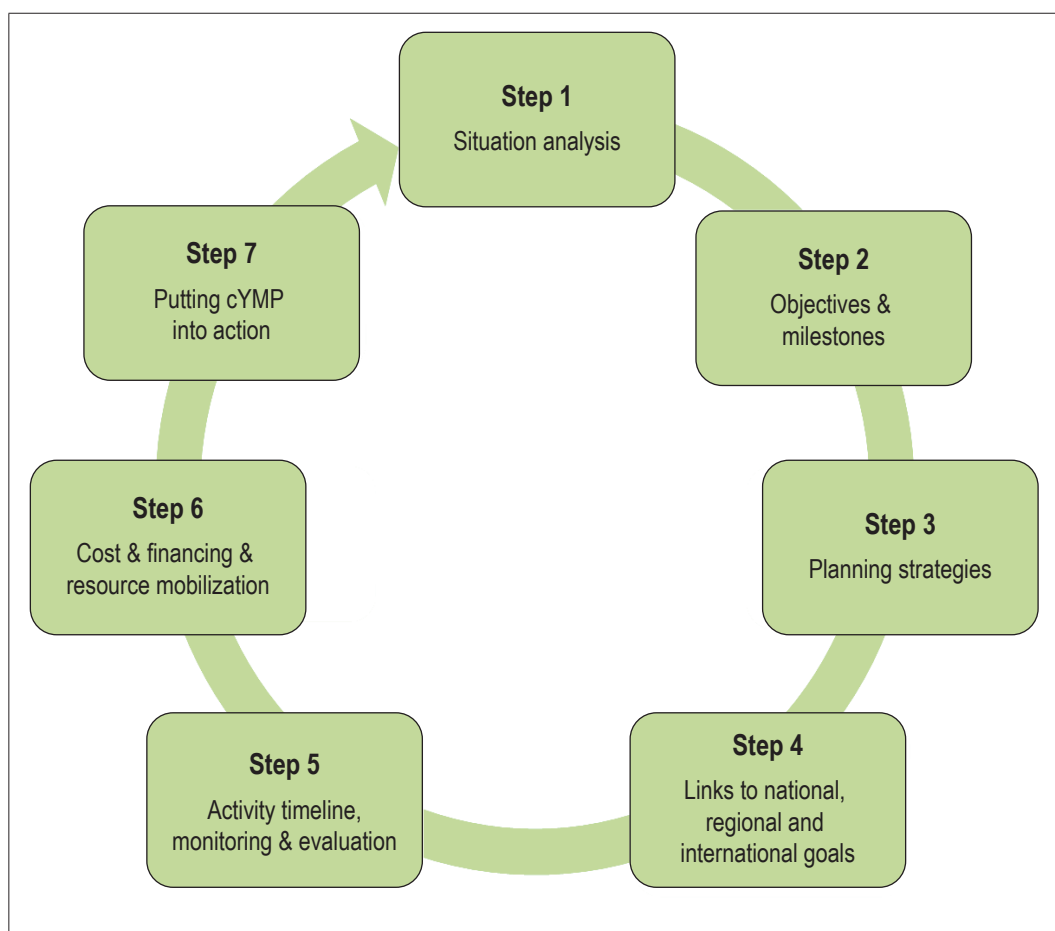
At the end of each year, or at every quarter, an immunization planning and review meeting should be conducted with the participation of national and sub-national immunization managers, other relevant departments and partner agencies. These meetings should be used as an opportunity to evaluate the previous annual workplan using the monitoring and evaluation framework and research findings, to discuss achievements and problems and to develop the upcoming annual workplan based on available data and resources. Where possible, other stakeholders in immunization services delivery, including local authorities, surveillance staff, the private sector and NGOs, could also become active participants in the review and planning process.

Table 6: Annual workplan  
(sample only from cMYP costing guidelines)

Year 1																		
Immunization component	Activity	Start month	End month	% Compl	1	2	3	4	5	6	7	8	9	10	11	12	Expected output	Resources needed
Immunization services																		
	Develop a list of high risk communities and collaborate with local authorities to ensure all households are registered for health and immunization services	1	6		x	x	x	x	x	x							Line list of high risk communities identified	0
	Conduct Micro planning workshops in 100% of identified high risk communities	6	7							x	x						Micro-plans developed in x high risk communities	\$5,000
	Implement and monitor Plan to reach all areas at-least four times a year	8	12									x	x	x	x		Micro-plans implemented in x high risk communities	\$40,000
Year 2																		
Year 3																		
Year 4																		
Year 5																		

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### 3. Conclusion — checklist for cMYP development



All steps should now have been completed for development of a cMYP using the seven planning steps to plan for the seven immunization system components (linked to seven health system building blocks).

As these Guidelines have tried to reinforce, planning is an ongoing cyclical process built around continuous use of data, information and dialogue, to respond and adapt in a timely and effective manner to a changing immunization and health systems context, as outlined most recently in the Global Vaccines Action Plan.

The following page presents a checklist to ensure that all essential components of a cMYP have now been completed.

The checklist includes essential sub-steps in each of the seven planning steps, and concludes with relevant country-specific endorsement of the cMYP by the Ministry of Health and/or the Ministry of Finance.

**Figure 10: Checklist for completion of cMYP**

<p><b>A situation analysis</b> documenting strengths and weaknesses of routine immunization, accelerated disease control and elimination initiatives and the seven immunization system components, as well as taking into account health system barriers and context.</p> <p><i>Immunization system components analysis</i></p> <p><i>Health system barriers and context analysis</i></p> <p><i>Findings from sector and immunization reviews integrated into situation analysis and strategies</i></p> <p><i>EPI review</i></p> <p><i>EVM assessment</i></p> <p><i>Data quality assessments</i></p> <p><i>Post-introduction evaluations</i></p> <p><i>Coverage surveys</i></p> <p><i>Other.....</i></p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>A set of objectives and milestones</b> for achievement for the coming five-year period, that document the main targets and expected achievements of the national programme, and which support overall national, regional and global goals for immunizations and public health.</p> <p><i>Objectives defined</i></p> <p><i>Milestones set</i></p> <p><i>Priority-setting exercise conducted</i></p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>A set of main strategies</b> and activities which describe how the immunization objectives will be achieved. The strategies build on strengths and respond to weaknesses identified in the situation analysis and should cover at a minimum the following components.</p> <p><i>Programme management plan</i></p> <p><i>Human resource management plan</i></p> <p><i>Costing and financing analysis and plan</i></p> <p><i>Vaccines, cold-chain and logistics plan</i></p> <p><i>Immunization services plan</i></p> <p><i>Monitoring, surveillance and reporting plan</i></p> <p><i>Demand generation, advocacy and communication plan</i></p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>Links to national, regional and global immunization and health-sector goals</b> and strategies are assessed in the cMYP, to ensure synergies between national and global efforts and as a means of checking on the comprehensiveness of plan content.</p> <p><i>Strategies cross-checked with GVAP</i></p> <p><i>Targets aligned with region</i></p> <p><i>Strategies cross-checked with sector plan</i></p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

<p><b>An activity timeline and monitoring and evaluation framework</b> is established which points to targets and the measures which will be applied to monitor progress. This section of the cMYP should also document a monitoring and evaluation plan that includes systematic data collection and analysis to evaluate progress through planning and surveillance review, sub-national indicator tracking, supervision programmes and research.</p> <p><i>Activity timeline set</i></p> <p><i>Monitoring and evaluation framework defined</i></p> <p><i>Monitoring and evaluation plan</i></p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>Costing and financing.</b> A section in the plan will describe overall plan costs, finance and financial gaps. This section will document a resource mobilization strategy to address these gaps, as well as document strategies to enhance sustainability.</p> <p><i>Plan costed</i></p> <p><i>Sources of finance and finance gaps identified</i></p> <p><i>Resource mobilization strategy</i></p> <p><i>Sustainability plan</i></p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>Putting the cMYP into action.</b> This section of the plan should document the means by which national immunization goals, strategies and main activities will be implemented, monitored and supported through annual operational plans (both health sector and immunization AOPs), and sub-national plans supported by the monitoring and evaluation plan.</p> <p><i>Annual operational plan (AOP) and budget request</i></p> <p><i>Sub-national plans</i></p> <p><i>Planning, monitoring and surveillance review</i></p> <p><i>Supervision plan</i></p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>Relevant political endorsement of the plan</b> by the Ministry of Health, Ministry of Finance, or other.</p>	<input type="checkbox"/>

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## 4. Annexes

# Annex 1:

## Step 1: Situation analysis

**Table 1A: Situation analysis by accelerated disease-control initiatives**

Disease-control initiative	Suggested indicators	National status*		
		2010	2011	2012
Polio	OPV3 coverage			
	Non-polio AFP rate per 100 000 children under 15 years-of-age			
	Number of rounds of national and sub-national immunization days			
	Coverage range			
MNT	TT2+ coverage			
	Percentage target population protected at birth from neonatal tetanus			
	Number and proportion of districts reporting >1 case of neonatal tetanus per 1000 live births			
	Was there an SIA? (Y/N)			
	Neonatal deaths reported and investigated			
	Delivery at facility rate			
Measles & rubella	Measles / MR vaccination coverage (2 doses)			
	Number of laboratory confirmed measles/rubella outbreaks			
	Geographic extent (NID)			
	Age group			
	Coverage			
	Total measles cases (Lab/clinical/epidemiological)			
	Total rubella cases (Lab/clinical/epidemiological)			
Yellow fever	YF coverage			
	Number and percentage of districts reporting >1 suspected case			
	Was a preventive campaign conducted? (Y/N)			
Epidemic meningitis	Meningococcal A coverage			

\* It is useful to include data source (e.g. WHO/UNICEF Joint Reporting Form, GAVI Annual Progress Report, etc.) for each indicator.

**Table 1B: Situation analysis of routine EPI by immunization system components**

System components	Suggested indicators	RESULTS		
		2010	2011	2012
1. IMMUNIZATION SERVICES				
Immunization coverage	Official coverage estimates % DTP3			
	Official coverage estimates % measles			
	Other official coverage estimates as per immunization schedule			
	Most recent survey coverage % DTP3			
	Percentage fully immunized child			
Immunization demand	Percentage drop-out DTP1– DTP3			
	Percentage drop-out BCG–MCV1			
Immunization equity	Percentage gap in DTP3 between highest and lowest socio- economic quintiles			
	Number of districts with DTP3 coverage >80%			
	Number of high-risk communities identified for accelerated routine immunization programming			
Integration	Percentage services provided at fixed facilities			
	Guidelines on outreach health- service package developed			
	Was a preventive campaign conducted? (Y/N)			
New vaccines introduction	Number of new vaccines introduced into the routine schedule in the last plan period			
	Pentavalent coverage			
	Rotavirus coverage			
2. PROGRAMME MANAGEMENT				
Law & regulation	What numbers of functions are conducted by the NRA?			
	Is there legislation or other administrative order establishing a line item for vaccines?			
	Is there legislation identifying the sources of public revenue for immunization financing?			
Policy	Has the national immunization policy been updated in the last five years?			
Planning	Does the country have an annual workplan for immunization funded through Ministry of Health budgeting processes?			
	What are the number of districts with an annual micro-plan for immunization?			
Coordination	What were the number of ICC (or equivalent) meetings held last year at which routine immunization was discussed?			
	What were the number of NITAG (or equivalent) meetings held last year?			
Advocacy	How many presentations on immunization performance or expenditures were made to parliament?			

System components	Suggested indicators	RESULTS		
		2010	2011	2012
3. HUMAN RESOURCES MANAGEMENT				
HR numbers	Number of health workers per 10 000 population			
	Percentage vaccinator posts currently vacant			
Capacity-building	Number of health workers and managers trained in immunization services through MLM or IIP training per year			
	Percentage of health workers trained in immunization in the last two years (data from PIE and EPI reviews)			
	Curriculum review for pre-service medical and nursing immunization education conducted			
Supervision	Average number of central supervision visits to each district level per year			
4. COSTING AND FINANCING				
Financial sustainability	What percentage of total routine vaccine spending was financed using government funds (including loans and excluding external public financing)?			
	Was the line item in the national budget for immunization 100% funded?			
	What percentage of immunization resources are being met by the domestic health budget (as identified in the annual budget plan)?			
	Government expenditures on routine immunization per surviving infant (JRF 6700)			
	Are sub-national immunization budgets and expenditures monitored and reported at national level?			
5. VACCINE SUPPLY, QUALITY & LOGISTICS				
Transport / mobility	Percentage of districts with a sufficient number of supervisory/EPI field activity vehicles /motorbikes/ bicycles in working condition			
Vaccine supply	Was there a stockout at national level during the last year?			
	If yes, specify duration in months			
	If yes, specify which antigen(s)			
Cold-chain/logistics	Percentage of districts with adequate numbers of appropriate and functional cold-chain equipment			
	What was the year of last inventory assessment for all cold-chain, transport and waste management equipment (or EVM)?			
	Number of PHC facilities with >80% score for all indicators on the last EVM assessment			
	Percentage of districts with availability of a cold-chain replacement plan			
Waste disposal	Availability of a waste-management policy and plan			

System components	Suggested indicators	RESULTS		
		2010	2011	2012
6. SURVEILLANCE & REPORTING				
Routine surveillance	Percentage of surveillance reports received at national level from districts compared to number of reports expected			
	AFP detection rate per 100 000 population under 15 years-of-age			
	Percentage suspected measles cases for which a laboratory test was conducted			
	Number of neonatal deaths for which a follow-up investigation was conducted			
	Sentinel surveillance for rotavirus established			
	Sentinel surveillance for meningitis (Hib/PCV) established			
	Percentage of suspected meningitis cases tested for Hib/pneumococcal disease according to standard protocol			
Coverage monitoring	Percentage gap in match between DTP3 survey coverage and officially reported figures			
Immunization safety	Percentage of districts that have been supplied with adequate (equal or more) number of AD syringes for all routine immunizations			
Adverse events	National AEFI system is active with a designated national committee			
	Number of serious AEFI cases reported and investigated			
7. DEMAND GENERATION AND COMMUNICATION				
Communication strategy	Availability of a routine immunization communication plan			
Research	Year of last study on community knowledge, attitudes and practices in relation to immunization			
Demand	Percentage of outreach services held as planned			
	High-risk plan for disadvantaged communities			

### School immunization activities

Age	Antigens provided	Coverage 2010	Coverage 2011	Coverage 2012

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# Annex 2:

## Step 2. Objectives, milestones and priorities

**Table 2: National objectives and milestones, and priorities**

Immunization services	Current performance	Objectives	Milestones	Order of priority
Immunization services				
Immunization coverage				
Immunization demand				
Immunization equity				
New vaccines introduction				

# Annex 3:

## Step 3. Strategies and activities

Table 3: Strategies and activities

Immunization services	Objectives	Strategies	Main activities
Immunization services			
Immunization coverage			
Immunization demand			
Immunization equity			
New vaccines introduction			

# Annex 4:

## Step 4. GVAP checklist

GVAP strategies	Key activities	Activity included in cMYP			
Strategic objective 1: All countries commit to immunization as a priority.		Yes	No	Not applicable	New activity needed
Establish and sustain commitment to immunization	<ul style="list-style-type: none"> <li>Ensure legislation or legal framework in all countries, including provisions for a budget line for immunization, and for monitoring and reporting.</li> </ul>				
	<ul style="list-style-type: none"> <li>Develop comprehensive national immunization plans that are part of overall national health plans through a bottom-up process including all stakeholders.</li> </ul>				
	<ul style="list-style-type: none"> <li>Set ambitious but attainable country-specific targets within the context of morbidity and mortality reduction goals.</li> </ul>				
	<ul style="list-style-type: none"> <li>Scrutinize, defend, and more closely follow immunization budgets, disbursements and immunization programme activities.</li> </ul>				
	<ul style="list-style-type: none"> <li>Support local civil society organizations and professional associations to contribute to national discussions on immunizations and health.</li> </ul>				
Inform and engage opinion leaders on the value of immunization	<ul style="list-style-type: none"> <li>Explore models to promote collaboration between the stakeholders that generate evidence on immunization and those who use it, to set priorities and formulate policies.</li> </ul>				
	<ul style="list-style-type: none"> <li>Develop and disseminate the evidence base on the public-health value of vaccines and immunization and the added value of achieving equity in access and use of immunization.</li> </ul>				
	<ul style="list-style-type: none"> <li>Develop and disseminate the evidence base for the broad economic benefits of immunization for individuals, households, communities and countries.</li> </ul>				
	<ul style="list-style-type: none"> <li>Include immunization in the agendas of governing body meetings at all levels and in other social, health and economic forums.</li> </ul>				

GVAP strategies	Key activities	Activity included in cMYP			
Strategic objective 1: All countries commit to immunization as a priority.		Yes	No	Not applicable	New activity needed
Strengthen national capacity to formulate evidence-based policies	<ul style="list-style-type: none"> <li>Create or strengthen independent bodies that formulate national immunization policies (for example, NITAGs or regional technical advisory groups).</li> </ul>				
	<ul style="list-style-type: none"> <li>Develop more effective ways for National Regulatory Agencies (NRAs), Health Sector Coordination Committees (HSCCs), and Interagency Coordination Committees (ICCs) to support immunization programmes as part of disease-control programmes and preventive health care.</li> </ul>				
	<ul style="list-style-type: none"> <li>Create regional forums and peer-to-peer exchange of information, best practices and tools.</li> </ul>				
	<ul style="list-style-type: none"> <li>Create expanded and more transparent mechanisms for aggregating, sharing and using information to monitor commitments.</li> </ul>				

GVAP strategies	Key activities	Activity included in cMYP			
Strategic objective 2: Individuals and communities understand the value of vaccines and demand immunization as both their right and responsibility.		Yes	No	Not applicable	New activity needed
Engage individuals and communities on the benefits of immunization and hear their concerns	<ul style="list-style-type: none"> <li>Engage in a dialogue which both transmits information and responds to people's concerns and fears.</li> </ul>				
	<ul style="list-style-type: none"> <li>Utilize social media tools and lessons from commercial and social marketing efforts.</li> </ul>				
	<ul style="list-style-type: none"> <li>Leverage new mobile and internet-based technologies.</li> </ul>				
	<ul style="list-style-type: none"> <li>Include immunization in the basic education curriculum.</li> </ul>				
	<ul style="list-style-type: none"> <li>Conduct communications research.</li> </ul>				
Create incentives to stimulate demand	<ul style="list-style-type: none"> <li>Create incentives to households and health workers for immunization, where appropriate, and while respecting the autonomy of beneficiaries (for example, cash or in-kind transfers, bundling of services, media recognition).</li> </ul>				
	<ul style="list-style-type: none"> <li>Conduct social research to improve the delivery of immunization services and the ability to meet the needs of diverse communities.</li> </ul>				
Build advocacy capacity	<ul style="list-style-type: none"> <li>Recruit new voices, including those of educators, religious leaders, traditional and social media personalities, family physicians, community health workers and trained immunization champions (among others).</li> </ul>				
	<ul style="list-style-type: none"> <li>Train health-care workers on effective communication techniques, especially to address vaccine hesitancy and to respond to reports of serious AEFIs in order to maintain trust and allay fears.</li> </ul>				
	<ul style="list-style-type: none"> <li>Engage, enable and support in-country CSOs to advocate to local communities and policy-makers and in local and global media regarding the value of vaccines.</li> </ul>				
	<ul style="list-style-type: none"> <li>Create national or regional advocacy plans that involve in-country CSOs.</li> </ul>				
	<ul style="list-style-type: none"> <li>Link global, national and community advocacy efforts with professional and academic networks.</li> </ul>				

GVAP strategies	Key activities	Activity included in cMYP			
Strategic objective 3: The benefits of immunization are equitably extended to all people.		Yes	No	Not applicable	New activity needed
Develop and implement new strategies to address inequities	<ul style="list-style-type: none"><li>Recast "Reaching Every District" to "Reaching Every Community" to address inequalities within districts.</li></ul>				
	<ul style="list-style-type: none"><li>Engage underserved and marginalized groups to develop locally tailored, targeted strategies for reducing inequalities.</li></ul>				
	<ul style="list-style-type: none"><li>Introduce appropriate new vaccines in national immunization programmes (see also Objective 5).</li></ul>				
	<ul style="list-style-type: none"><li>Establish a life course approach to immunization planning and implementation, including new strategies to ensure equity across the lifespan.</li></ul>				
	<ul style="list-style-type: none"><li>Prevent and respond to vaccine-preventable diseases during disease outbreaks, humanitarian crises and in conflict zones.</li></ul>				
Build knowledge base and capacity to enable equitable delivery	<ul style="list-style-type: none"><li>Track each individual's immunization status, leveraging immunization registries, electronic databases and national identification number systems.</li></ul>				
	<ul style="list-style-type: none"><li>Take advantage of community structures to enhance communication and deliver services (for example, traditional birth attendants, birth registries).</li></ul>				
	<ul style="list-style-type: none"><li>Involve CSOs in community outreach and planning.</li></ul>				
	<ul style="list-style-type: none"><li>Develop new approaches to community engagement for urban and peri-urban areas.</li></ul>				
	<ul style="list-style-type: none"><li>Train health workers and CSOs on how to engage communities, identify influential people who can assist in planning, organizing and monitoring health and immunization programmes, identify community needs and work with communities to meet those needs.</li></ul>				
	<ul style="list-style-type: none"><li>Conduct operational and social science research to identify successful strategies to reduce inequalities and improve the quality and delivery of immunization services.</li></ul>				

GVAP strategies	Key activities	Activity included in cMYP			
Strategic objective 4: Strong immunization systems that are an integral part of a well-functioning health system.		Yes	No	Not applicable	New activity needed
Develop and implement new strategies to address inequities	<ul style="list-style-type: none"><li>Ensure that global vaccine programmes focusing on eradication and elimination goals are incorporated into national immunization programmes.</li></ul>				
	<ul style="list-style-type: none"><li>Ensure that new vaccine deployment is accompanied by comprehensive disease-control plans.</li></ul>				
	<ul style="list-style-type: none"><li>Ensure coordination between the public and private sectors for new vaccine introduction, reporting of vaccine-preventable diseases and administration of vaccines, and ensure quality of vaccination in the public and private sectors.</li></ul>				
	<ul style="list-style-type: none"><li>Consider the inclusion of vaccines in health programmes across the life course.</li></ul>				
Strengthen monitoring and surveillance systems	<ul style="list-style-type: none"><li>Improve the quality of all immunization administrative data and promote its analysis and use at all administrative levels to improve programme performances.</li></ul>				
	<ul style="list-style-type: none"><li>Develop and promote the use of new technologies for collection, transmission and analysis of immunization data.</li></ul>				
	<ul style="list-style-type: none"><li>Further strengthen, improve quality and expand disease surveillance systems to generate information based on laboratory-confirmed cases for decision-making, monitoring the impact of immunization on morbidity and mortality and changes in disease epidemiology.</li></ul>				
	<ul style="list-style-type: none"><li>Ensure capacity for vaccine safety activities, including capacity to collect and interpret safety data, with enhanced capacity in countries that introduce newly-developed vaccines.</li></ul>				
Strengthen capacity of managers and frontline workers	<ul style="list-style-type: none"><li>Ensure that immunization and other primary health- care programmes have adequate human resources to schedule and deliver predictable services of acceptable quality.</li></ul>				
	<ul style="list-style-type: none"><li>Increase levels of pre-service, in-service and post-service training for human resources, and develop new, relevant curricula that approach immunization as a component of comprehensive disease control.</li></ul>				
	<ul style="list-style-type: none"><li>Promote coordinated training and supervision of community-based health workers.</li></ul>				

GVAP strategies	Key activities	Activity included in cMYP			
Strategic objective 4: Strong immunization systems that are an integral part of a well-functioning health system.		Yes	No	Not applicable	New activity needed
Strengthen infrastructure and logistics	<ul style="list-style-type: none"> <li>Innovate to improve cold-chain capacity and logistics, as well as waste management.</li> </ul>				
	<ul style="list-style-type: none"> <li>Minimize the environmental impact of energy, materials and processes used in immunization supply systems, both within countries and globally.</li> </ul>				
	<ul style="list-style-type: none"> <li>Staff supply systems with adequate numbers of competent, motivated and empowered personnel at all levels.</li> </ul>				
	<ul style="list-style-type: none"> <li>Establish information systems that help staff accurately track the available supply.</li> </ul>				

GVAP strategies	Key activities	Activity included in cMYP			
Strategic objective 5: Immunization programmes have sustainable access to predictable funding, quality supply and innovative technologies.		Yes	No	Not applicable	New activity needed
Increase total amount of funding	• Establish a commitment for governments to invest in immunization according to their ability to pay and the expected benefits.				
	• Engage new potential domestic and development partners and diversify sources of funding.				
	• Develop the next generation of innovative financing mechanisms.				
Increase affordability for middle-income countries	• Explore differential pricing approaches to define explicit criteria for price tiers and the current and future prices to be made available to lower middle-income and middle-income countries.				
	• Explore pooled negotiation or procurement mechanisms for lower middle-income and middle- income countries.				
Improve allocation of funding in low- and middle-income countries	• Strengthen budgeting and financial management in-country to better integrate financial and health-care planning and priority setting.				
	• Coordinate funding support from development partners and other external sources.				
	• Evaluate and improve funding support mechanisms on the basis of their effectiveness in reaching disease goals.				
	• Base funding on transparency and objectivity, in order to ensure the sustainability of programmes.				
	• Promote the use of cost and cost-benefit arguments in fundraising, decision-making and defence of immunization funding.				
	• Explore pay-for-performance funding systems.				
Secure quality supply	• Build and support networks of regulators and suppliers to share best practices and to improve quality assurance capabilities and quality control.				
	• Develop tools to strengthen global standardization of manufacturing and regulatory processes.				
	• Strengthen national regulatory systems and develop globally harmonized regulations.				
	• Ensure a forum where countries can communicate expected demand for vaccines and technologies and provide guidance to manufacturers on desired product profiles.				

GVAP strategies	Key activities	Activity included in cMYP			
Strategic objective 6: Country, regional and global R&D innovations maximize the benefits of immunization.		Yes	No	Not applicable	New activity needed
Expand capabilities and increase engagement with end-users	• Engage with end users to prioritize vaccines and innovations according to perceived demand and added value.				
	• Establish platforms for exchange of information on immunization research and consensus building.				
	• Build more capacity and human resources in low- and middle-income countries to conduct R&D and operational research.				
	• Increase networking among research centres for efficient building of partnerships among high-, middle- and low-income countries' institutions.				
	• Promote collaboration between traditional research disciplines and scientists from disciplines not previously engaged in vaccine research.				
Enable the development of new vaccines	• Research on the fundamentals of innate and adaptive immune responses, particularly in humans.				
	• Research on immunologic and molecular characteristics of microbes.				
	• Improve understanding of the extent and causes of variation in pathogen and human population responses to vaccines.*				
Accelerate development, licensing and uptake of vaccines	• Promote greater access to technology, know-how and intellectual property for adjuvants and their formulation into vaccines.				
	• Develop non-syringe delivery mechanisms and vaccine packaging that best suits the needs and constraints of countries' programmes.				
	• Develop thermo-stable rotavirus and measles vaccines.				
	• Develop new bioprocessing and manufacturing technologies.				
	• Develop a global, regulatory science research agenda.				
	• Adopt best practices in portfolio and partnership management for R&D.				
Improve programme efficiencies and increase coverage and impact	• Research the use of more effective information through modern communication technologies.				
	• Conduct representative epidemiological, immunological, social and operational studies and investigations of vaccine impact to guide health economics analysis.				

\* This may not be relevant or required for all countries.

GVAP strategies	Key activities	Activity included in cMYP			
Strategic objective 6: Country, regional and global R&D innovations maximize the benefits of immunization.		Yes	No	Not applicable	New activity needed
	<ul style="list-style-type: none"> <li>Perform operational research on improved delivery approaches for life course immunization, and vaccination in humanitarian emergencies, fragile states, and countries in and emerging from conflict.</li> </ul>				
	<ul style="list-style-type: none"> <li>Perform research on interference effects and optimum delivery schedules.</li> </ul>				
	<ul style="list-style-type: none"> <li>Perform research to develop improved diagnostic tools for conducting surveillance in low-income countries.</li> </ul>				

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# Annex 5:

## Step 5. Activity timeline

Table 4: Constructing an activity timeline – Immunization services component

Immunization services	Objectives	Strategies	Activities	Timeline				
				2013	2014	2015	2016	2017
Immunization coverage								
Immunization demand								
Immunization equity								
New vaccines introduction								

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# Annex 6:

## Step 5. Monitoring and evaluation framework

Table 5: National immunization monitoring & evaluation framework

Goal	IMPACT INDICATORS	Baseline			Targets							
		Result	Year	Source	2013	2014	2015	2016	2017	2018	Means of verification	
Immunization component – Immunization services												
Objective	OUTCOME INDICATORS	Baseline			Targets							
		Result	Year	Source	2013	2014	2015	2016	2017	2018	Means of verification	
Immunization component – Immunization services												
Strategies	OUTPUT INDICATORS	Baseline			Targets							
		Result	Year	Source	2013	2014	2015	2016	2017	2018	Means of verification	
Immunization component – Immunization services												
Inputs & Activities	INPUT INDICATORS	Baseline			Targets							
		Result	Year	Source	2013	2014	2015	2016	2017	2018	Means of verification	
Immunization component – Immunization services												

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# Annex 7:

## Step 7. Annual implementation plan

Table 6: Annual workplan (from cMYP costing guidelines)

Year 1																		
Immunization component	Activity	Start month	End month	% Compl	1	2	3	4	5	6	7	8	9	10	11	12	Expected output	Resources needed
Immunization services																		
Year 2																		
Year 3																		
Year 4																		
Year 5																		

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# Annex 8a:

## Template for cMYP summary

Results: Immunization situation analysis summary 2007–2012																										
<b>Immunization achievements</b>  [Document here the main achievements in immunization in terms of disease control and immunization system development in the last planning cycle]		<b>Immunization coverage</b>  [Insert a graph here of measles and/or DTP3 coverage for the last plan cycle using the JRF reported data. If possible, graph last survey results using a bar graph]																								
<b>Immunization system analysis</b>  [What are the main immunization system strengths and weaknesses? Prioritize five or six main points based on impacts on disease control efforts]		<b>Health system constraints</b>  [What are the main health system constraints to immunization performance — prioritize six main points based on analysis of health system building blocks using NHP, EPI review or health sector review findings — prioritize according to main impacts on immunization system performance]																								
<b>Vaccine-preventable disease incidence (JRF)</b> [List the current level of VPD incidence]		<b>Disease control (strengths/weaknesses)</b>  [Insert five priority programme or disease-control milestones achieved for disease-control initiatives in the last plan cycle]																								
<table border="1"> <thead> <tr> <th>Indicators</th> <th>Baseline 2007</th> <th>2011</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		Indicators	Baseline 2007	2011																						
Indicators	Baseline 2007	2011																								
<b>Baseline costing profile</b> [from baseline costing]		<b>Baseline financing profile</b>  [Insert graphical or statistical data from the costing and financing tool that demonstrates the main sources of finance for the last year of the previous cMYP]																								
<table border="1"> <thead> <tr> <th>Baseline Indicators</th> <th>2012</th> </tr> </thead> <tbody> <tr><td>Total EPI expenditure</td><td> </td></tr> <tr><td>Campaigns</td><td> </td></tr> <tr><td>Routine immunization only</td><td> </td></tr> <tr><td>Cost per capita</td><td> </td></tr> <tr><td>Cost per DTP3 child</td><td> </td></tr> <tr><td>Percentage vaccines and supplies</td><td> </td></tr> <tr><td>Percentage national funding</td><td> </td></tr> <tr><td>Percentage government health expenditures</td><td> </td></tr> <tr><td>Percentage GDP</td><td> </td></tr> <tr><td>Percentage shared health systems cost</td><td> </td></tr> <tr><td><b>TOTAL</b></td><td> </td></tr> </tbody> </table>		Baseline Indicators	2012	Total EPI expenditure		Campaigns		Routine immunization only		Cost per capita		Cost per DTP3 child		Percentage vaccines and supplies		Percentage national funding		Percentage government health expenditures		Percentage GDP		Percentage shared health systems cost		<b>TOTAL</b>		
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Percentage GDP																										
Percentage shared health systems cost																										
<b>TOTAL</b>																										

Strategic Plan: cMYP immunization plan summary 2013–2018						
National immunization priorities		National immunization goals and objectives 2013– 2018				
<p>[Based on the situation analysis, and on criteria for health priority setting (efficiency, equity, impact, feasibility, link to NHP) , identify the top five or six priorities for immunization programming 2013–2018]</p>		<p>[List the national goals and objectives ensuring they are specific, measurable, accurate, relevant and time bound. Goals are higher level morbidity and mortality, and should be measured by impact indicators, and should link to NHP goals (e.g. under-five mortality reduction). Objectives relate to programme coverage, and should be measured by programme outcome indicators (e.g. % DTP3 coverage) or programme output indicators e.g. (e.g. % posts filled, % vaccines nationally funded)]</p>				
National programme milestones and disease control targets		Priority national programme strategies				
<p>[What are the main immunization system milestones and disease-control targets for 2013–2018? Prioritize the top five or six based on criteria for priority-setting described above. Milestones describe the shorter term and concrete steps to be undertaken towards achieving the longer-term objectives of the programme. Collectively, milestones and targets should be monitored using an agreed national M&amp;E framework with agreed indicator definitions. This framework should relate to the National Health Plan M&amp;E framework and JRF reporting system]</p>		<p>[What are the priority strategies by which the national goals and programme objectives will be achieved? Prioritize according to agreed national criteria e.g. efficiency, equity, impact, feasibility, link to NHP. Strategies should demonstrate how objectives will be achieved]</p>				
Partnerships & sustainability strategy		Health and development impacts				
<p>[Identify main partners and governance mechanisms — consider ICC, HSSCs, NITAG and their representation through government, CSOs and the private sector and other ministries. Identify main sustainability strategies]</p>		<p>[Identify here proposed impact of immunization, which could include: (a) child mortality reduction gains; (b) reduction in VPD disease and disability rates; (c) reduction in hospital admission rates for pneumonia, meningitis or diarrhoea; (d) savings to national-health budgets through reduced hospitalization; (e) economic growth through improved productivity and educational attainments; (f) poverty reduction through reduced medical care costs]</p>				
Costing and financing projections 2013–2018						
	2013	2014	2015	2016	2017	2018
Total resources required						
Per capita						
Total secure financing						
Funding gap						
Total probable Financing						
Funding Gap						

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# Annex 8b:

## cMYP summary example

## Results: Immunization situation analysis summary 2007–2012

### Immunization achievements 2007–2012

- 1) Last polio case 1998.
- 2) Introduced new vaccines to prevent liver cancer (hepatitis B) and to support elimination of measles.
- 3) Increased immunization coverage by 10% from a baseline figure of 70% to 80% in 2011.
- 4) Trained 250 new staff in vaccination.
- 5) Installed modern cold-chain protection of vaccines in 40 health facilities.
- 6) Established a scientific committee to advise government on new vaccines and technologies and on immunization safety.

### Immunization system analysis

- 1) An immunization law is required to secure a budget line for vaccine procurements.
- 2) There is lack of a trained cold-chain technicians in two provinces.
- 3) There are still 30 health facilities with outdated cold-chain equipment.
- 4) Traditional vaccines are 50% funded internationally.
- 5) There is underreporting of surveillance data and unimmunized children in two districts, and no sentinel surveillance for meningitis.

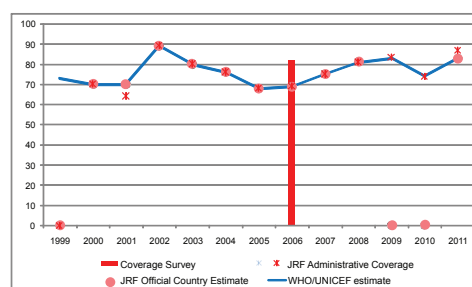
### Vaccine-preventable disease incidence (JRF)

Indicators	Baseline 2007	2011
AFP	1.8	2
Measles case (laboratory)	75	20
Rubella case (laboratory)	4	30
Neonatal tetanus	20	8
Hib meningitis	No data	30
Rotavirus diarrhoea	No data	500
Inv pneumococcal disease	No data	No data

### Baseline Costing Profile

Baseline indicators	2012
Total EPI expenditure	US\$ 1 620 112
Campaigns	US\$ 99 366
Routine immunization only	US\$ 1 520 747
Cost per capita	US\$ 1.4
Cost per DTP3 child	US\$ 46.7
Percentage vaccines and supplies	11.1%
Percentage national funding	61.0%
Percentage government health expenditures	2.8%
Percentage GDP	0.05%
Percentage shared health systems cost	25%
<b>TOTAL</b>	<b>\$1,680,562</b>

### Immunization coverage



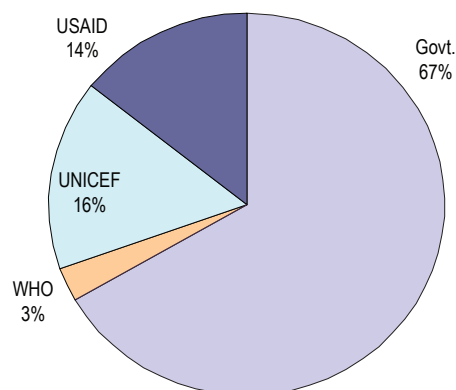
### Health system constraints

- 1) There is insufficient prioritization of health outreach budgets in 50% of districts.
- 2) Health-worker remuneration, particularly in remote areas, is not keeping pace with the cost of living.
- 3) There is inadequate transport for health outreaches.
- 4) There are no structured health-service programmes for the urban slum areas of the capital city.
- 5) There is poor access to two districts of the country due to ongoing conflict and lack of communications.

### Disease control (strengths/weaknesses)

- 1) Neonatal mortality investigations strengthened in two high-risk districts.
- 2) Sentinel surveillance system, established at two district hospitals, for meningitis and pneumonia.
- 3) Percentage suspected measles cases tested still below target.
- 4) Monitoring site for congenital rubella syndrome not yet established.

### Baseline financing profile



Strategic Plan: Immunization plan summary 2013–2018																																	
National immunization priorities			Immunization priority objectives 2013–2018																														
<div>1) Increasing immunization coverage and reducing vaccine-preventable disease.</div> <div>2) Extending the reach of immunization services to remote area populations and to the urban poor.</div> <div>3) Linking other interventions to immunization outreach services in order to reach MDG child mortality reduction targets.</div> <div>4) Improving the quality of immunization through improved cold chain and logistics.</div> <div>5) Measles elimination.</div> <div>6) New vaccine introduction (PCV/rotavirus/HPV).</div>			<div>1) Objective 1: To achieve 80% fully immunized child in all districts by 2018.</div> <div>2) Objective 2: To reduce equity gaps between highest and lowest quintiles to &lt;20% by 2018.</div> <div>3) Objective 3: To introduce two new vaccines by 2018.</div> <div>4) Objective 4: To eliminate measles by 2018.</div> <div>5) Objective 5: Delivery of high-quality vaccines to the population through &gt;80% quality standards for vaccine management at all levels of the system by 2018.</div>																														
National programme monitoring framework			Priority national programme strategies																														
<table><tr><th>Indicator</th><th>2012</th><th>2018 target</th></tr><tr><td>DTP3 coverage</td><td>80%</td><td>95%</td></tr><tr><td>Percentage gap high/low quintiles DTP3</td><td>30%</td><td>20%</td></tr><tr><td>Measles case per 1 000 000</td><td>20</td><td>2</td></tr><tr><td>Hepatitis B seroprevalence &lt;5</td><td>4%</td><td>2%</td></tr><tr><td>Rotavirus diarrhoea cases</td><td>500</td><td>200</td></tr><tr><td>Neonatal tetanus cases</td><td>8</td><td>0</td></tr><tr><td>Percentage facility function cold chain</td><td>80%</td><td>100%</td></tr><tr><td>Enactment Immunization Law</td><td></td><td>Yes</td></tr></table>			Indicator	2012	2018 target	DTP3 coverage	80%	95%	Percentage gap high/low quintiles DTP3	30%	20%	Measles case per 1 000 000	20	2	Hepatitis B seroprevalence <5	4%	2%	Rotavirus diarrhoea cases	500	200	Neonatal tetanus cases	8	0	Percentage facility function cold chain	80%	100%	Enactment Immunization Law		Yes	<div>1) Improve resource mobilization through location of immunization objectives with the National Health Plan.</div> <div>2) Improve programme reach through strategic partnerships with local government and CSOs in high- risk areas.</div> <div>3) Improve programme impacts through extending the immunization schedule to schoolchildren and adults.</div> <div>4) Expand quality services through schools, the private sector and CSOs, through legislation and regulation.</div> <div>5) Build human resource quality and motivation through training and supervision in immunization.</div>			
Indicator	2012	2018 target																															
DTP3 coverage	80%	95%																															
Percentage gap high/low quintiles DTP3	30%	20%																															
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Percentage facility function cold chain	80%	100%																															
Enactment Immunization Law		Yes																															
Partnerships & sustainability strategy			Health and development impacts																														
<div>1) Establish a National Advisory Group on immunization with participation from academia, community and clinicians.</div> <div>2) Formalize partnerships with CSOs in two high-risk districts to expand services to communities in conflict-affected areas.</div> <div>3) Trial public/private partnerships in two cities for vaccination of the new born (BCG, hepatitis).</div> <div>4) Formalize networks with MoF and parliament to secure budgets for immunization.</div>			<div>1) Improve child survival through contribution to achievement of MDG5.</div> <div>2) Reduced disability in the community associated with vaccine-preventable disease (meningitis).</div> <div>3) Contribute to poverty reduction goals through reduction of preventable hospitalization for childhood illnesses.</div> <div>4) Contribute to national budget savings through reduced hospital burden of disease (pneumonia, rotavirus, diarrhoea, meningitis, other VPD).</div>																														
Costing and financing projections 2013–2018																																	
	2013	2014	2015	2016	2017	2018																											
Total resources required	US\$1,604,401	US\$1,929,518	US\$1,964,232	US\$1,761,002	US\$1,842,213	US\$1,604,401																											
Cost per capita	US\$1.5	US\$1,7	US\$1,7	US\$1,5	US\$1,5	US\$1,5																											
Total secure financing	US\$2,808,760	US\$1,466,785	US\$1,256,221	US\$1,189,820	US\$1,228,029	US\$2,808,760																											
Funding Gap	US\$ 83,436	US\$ 462,733	US\$ 738,067	US\$1,811,330	US\$644,655	US\$83,436																											
Total probable Financing		US\$265,000	US\$265,000	US\$265,000	US\$265,000	US\$265,000																											
Funding Gap	\$0	-\$83,436	\$237,733	\$473,067	\$1,546,330	\$379,655																											

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## Annex 9:

### Example activity timeline

Immunization system components	Strategies	Priority activities	2013	2014	2015	2016	2017
Immunization services	Implement / reinforce / sustain Reaching Every District (RED) approach in all districts	• Implement the five components of RED in all districts.	X	X	X	X	X
		• Organize workshops on microplanning with districts.	X	X	X	X	X
	Monitor correct administration of rotavirus vaccine and immunize all eligible infants	• Assist the health workers to plan and immunize the eligible children, both at fixed and outreach sessions.	X				
		• Intensify the supervision visits at operational level.	X	X	X	X	X
		• Conduct rotavirus vaccine post-introduction evaluation.	X				
	HPV vaccine introduction	• Conduct microplanning for HPV campaign using school-based campaign.					
		• Identify out-of-school girls and plan to immunize them using the health centre-based approach.					
		• Document vaccination and report.					
	Measles / rubella elimination activities	• Conduct a catch-up MR campaign in 2013.	X				
		• Introduce MR vaccine as a second dose of measles vaccine in routine vaccination.	X	X	X	X	X
Demand generation, advocacy, communication	Strengthening of the ICC	• Advocate and engage additional potential partners in ICC.	X				
		• Hold, on a monthly basis, technical ICC meetings.	X	X	X	X	X
		• Hold strategic ICC meetings on a quarterly basis.	X	X	X	X	X
	Development of integrated communication plan	• Develop, with other programmes, an integrated plan of communication.	X	X	X	X	X
		• Implement communication activities within the VPD programme.	X	X	X	X	X
		• Implement the developed plan.	X	X	X	X	X
	Implementation of communication plan for routine, supplementation and surveillance activities	• Develop the communication plan for measles.	X	X	X	X	X
		• Organize meetings with NGOs and associations, including community health workers, to discuss their participation in immunization activities.	X	X	X	X	X
	Advocacy with respect to decision- makers	• Plan and hold meetings with pharmacy directorate of MoH for NRA reinforcement.	X	X			

Immunization system components	Strategies	Priority activities	2013	2014	2015	2016	2017
Surveillance and reporting	Integrated disease surveillance and response	• Strengthen active surveillance for AFP, in all districts.	X	X	X	X	X
		• Establish a database on integrated disease surveillance.					
		• Convene monthly meetings with focal points for AFP surveillance.	X	X	X	X	X
	Reinforce links between laboratories for different conditions (polio and measles)	• Strengthen collaboration between the laboratories for polio and measles.	X	X	X	X	X
		• Provide sufficient reagents.	X	X	X	X	X
		• Reinforce the capacity of laboratory workers.	X				
	Case definition for pneumococcal and severe rotavirus diseases	• Train health workers for case definition of pneumococcal diseases and severe diarrhoeal to be reported.	X	X			
		• Update the reporting tools, which include rotavirus diseases, and train health workers on how to complete the tools.	X				
	Active case-based surveillance for measles / rubella by way of integrated surveillance for vaccine-preventable diseases	• Strengthen active surveillance for measles and rubella in all districts.	X	X	X	X	X
		• Conduct monthly meetings for surveillance focal points.	X	X	X	X	X
		• Develop district-level emergency preparedness and prevention plans.	X				
		• Strengthen analysis and use of data at all levels.	X				
		• Train health-facility managers in surveillance for AFP, measles, rubella, neonatal tetanus, pneumococcal and rotavirus disease.	X				
	Capacity-building for AEFI	• Train new district VPD focal points in AEFI.	X	X	X	X	X
		• Conduct regular monitoring and reporting of AEFI.	X	X	X	X	X

Immunization system components	Strategies	Priority activities	2013	2014	2015	2016	2017
Vaccine supply, cold-chain, logistics management	Regular high-quality vaccine supply at all levels	• Forecast, order and supply vaccines to all districts.	X	X	X	X	X
		• Assess cold-chains and logistics and procure additional cold-chain equipment for rotavirus vaccine introduction.	X				X
		• Provide health centres with revised growth monitoring cards.	X	X	X	X	
	Regular auto-disable (AD) syringe supply to all districts and health centres	• Implement the policy of providing AD syringes for all vaccines in all districts.	X	X	X	X	X
		• Build one incinerator per health facility « per district ».	X	X	X	X	X
	Vaccine management improvement	• Train health workers on vaccine forecast, stock management and vaccine wastage monitoring.	X	X	X	X	X
		• Provide appropriate revised management tools at district level.	X	X	X	X	X
		• Supervise teams at district and health facility levels.	X	X	X	X	X
		• Monitor vaccine wastage.	X	X	X	X	X
Programme management	Strengthening of ICC processes	• Hold technical ICC meetings on a monthly basis.	X	X	X	X	X
	EPI management improvement at all levels	• Develop on-job training plan and implement it for all the district health workers.	X	X	X	X	X
		• Supervise districts and health facilities.	X	X	X	X	X
		• Train health workers in EPI management.	X	X	X	X	X
		• Improve the management of data through continuing education, monitoring and feedback at all levels.	X		X	X	X
	Analyses to improve efficiency, effectiveness, access, and use of services	• Conduct operational researches (OR) on integrating other health interventions with immunization.	X	X			
		• Conduct OR to determine effective and efficient ways to reach the hard-to-reach populations.		X	X		
		• Conduct OR on new technologies.		X			
	Maintain existing links and explore integration with other health interventions	• Include vitamin A in 2012 measles campaign.		X		X	
		• Integrate vitamin A supplementation into routine vaccination.		X	X	X	X
		• Support implementation of IMNCI through routine vaccination.		X	X	X	X
		• Monitor performance with integrated interventions.	X	X			
		• Collaborate with integrated disease surveillance and response and with emergency humanitarian activities to assure that required vaccines are available during emergencies.		X	X	X	X

Immunization system components	Strategies	Priority activities	2013	2014	2015	2016	2017
Human resources management	Building capacity of front-line workers for quality immunization service delivery	• Integration of immunization into pre-service curriculum of medical and nursing staff.		X			
		• Implementation of training needs analysis for PHC workers.		X	X	X	
		• Implementation of continuing training programme in areas of priority training needs.			X		
	Improve staff retention and motivation of PHC workforce	• Implementation of performance-based management system.			X	X	X
	Fill all unfilled sanctioned posts at PHC facilities by 2015	• Submit planning request to Department of Personnel.			X	X	X
		• Orient new staff, including training programme in immunization.					
Costing, financing and resource mobilization	Submit request to Ministry of Finance for funding of all traditional vaccines by 2015	• Conduct regular advocacy meetings with Ministry of Finance and Ministry of Health to secure financing for health outreach and traditional vaccines.	X	X	X	X	X
	Secure financing for new vaccines	• Submit annual request to Ministry of Health and Ministry of Finance for co-finance of new vaccines.	X	X	X	X	X

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# Annex 10:

## Example monitoring and evaluation framework cMYP

Immunization system sub-component	Suggested indicators	Source of data	BASE LINE	TARGETS						
				2011	2013	2014	2015	2016	2017	2018
1. PROGRAMME MANAGEMENT										
Law & regulation	What number of functions are conducted by the NRA?	NRA terms of reference	3	3	4	3	4	3	4	4
	Legislation on immunization financing establishing line item for vaccines in national health budget	Immunization law		X						
	Legislation on immunization financing identifying sources of public revenue for immunization financing	Immunization law		X						
Policy	Has the national immunization policy been updated?	National immunization policy	No	No	Yes	No	Yes	No	Yes	Yes
Planning	Does the country have an annual workplan for immunization?	National immunization operational plan	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Coordination	What is the number of districts with an annual microplan for immunization (cumulative)?	Immunization programme records	5	7	10	12	15	20	26	26
	What were the number of ICC (or equivalent) meetings held last year at which routine immunization was discussed?	ICC minutes	2	2	4	4	4	4	4	4
	What were the number of NITAG (or equivalent) meetings held last year?	NITAG minutes	0	1	3	3	4	4	4	4
Advocacy	Number of presentations on immunization performance made to parliament	Immunization programme records	0	2	2	2	2	2	2	2
2. HUMAN RESOURCES MANAGEMENT										
HR numbers	Number of health workers/vaccinators per 10 000	MoH human resource data	2.4	2.8	3	3	3	3	3	3
Capacity-building	Number of health workers & managers accredited for immunization services through MLM training (cumulative)	National programme records	60	80	100	120	140	160	200	200
Supervision	Average number of central supervision visits to each district level per year	National programme records	6	6	6	6	6	6	6	6

Immunization system sub-component	Suggested indicators	Source of data	BASE LINE	TARGETS					
				2011	2013	2014	2015	2016	2017
3. COSTING AND FINANCING									
Financial sustainability	What percentage of total routine vaccine spending was financed using government funds (including loans and excluding external public financing)?	Programme records	8%		10%	10%	10%	10%	10%
	Is there a line item in the national budget for immunization that is 100% funded?	National health budget	No	No	Yes	Yes	Yes	Yes	Yes
	Government expenditures on routine immunization per surviving infant (JRF 6700)	JRF	US\$ 5	10	25	35	45	60	75
	Sub-national routine immunization expenditures per surviving infant	Immunization programme records	US\$ 10	20	30	40	50	60	70
4. VACCINE SUPPLY, QUALITY & LOGISTICS									
Vaccine supply	Was there a stockout at national level during the last year?	Programme records		N	N	N	N	N	N
	If yes, specify duration in months			5-12	3-12	2-12	1-12	0-12	0-12
	If yes, specify which antigen(s)			Measles	BCG	Measles	BCG	Measles	BCG
Cold-chain/ logistics	Percentage of districts with adequate numbers of functional cold-chain equipment	Immunization programme records	ND	ND	80%	80%	ND	80%	80%
	Year of last inventory assessment for all cold-chain, transport and waste management equipment (or EVM)	EVM report	No	Yes	No	Yes	No	Yes	No
Waste disposal	Availability of a waste- management plan	Waste management plan and EVM report	No	Yes	Yes	Yes	Yes	Yes	Yes

System component	Suggested indicators	Source of data	BASE LINE	TARGETS					
				2011	2013	2014	2015	2016	2017
5. IMMUNIZATION SERVICES									
Routine coverage	DTP3 coverage	National health information	70%	80%	82%	84%	90%	95%	95%
	Percentage of districts with >80% coverage	National health information	20%	20%	15%	7%	0%	0%	0%
	National DTP1–DTP3 drop-out rate	National health information	10%	8%	7%	6%	5%	5%	5%
	Percentage of districts with drop-out rate DTP1–DTP3 >10%	National health information	6%	3%	2%	1%	0%	0%	0%
Equity	Number of districts >80% coverage	National health information	4	3	2	1	0	0	0
	Percentage gap between lowest– highest socio-economic quintile DTP3	DHS survey	35% in 2008	30%	-	-	-	-	20%
Integration	Percentage services provided at fixed facilities	Coverage survey	40%	35%	30%	25%	20%	15%	15%
New vaccines	Percentage PCV coverage	National health information	52%	80%	82%	84%	90%	95%	95%
6. SURVEILLANCE & REPORTING									
Routine surveillance	Percentage of surveillance reports received at national level from districts compared to number of reports expected	National health information or public-health surveillance system	-	80%	95%	80%	95%	80%	95%
Coverage monitoring	How many districts in the previous year were reported as poorly performing?	National health information	4	3	2	1	0	0	0
Injection safety	Percentage of districts that have been supplied with adequate (equal or more) numbers of AD syringes for all routine immunizations	Immunization programme records	-	-	50%		50%		50%
Adverse events	National AEFI system is active with a designated national committee	AEFI meeting minutes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7. DEMAND GENERATION & COMMUNICATION									
Communication strategy	Availability of a plan	Communication strategy	No plan	Plan	Plan	Plan	Plan	Plan	Plan
Research	Year of last study on community knowledge, attitudes and practices in relation to immunization	KAP survey	No	Yes	No	Yes	No	Yes	No
Demand	Percentage services provided at fixed facilities	Coverage survey	40%	35%	30%	25%	20%	15%	15%
Planning	High-risk plan for disadvantaged communities	High-risk plan	No plan	Plan	Plan	Plan	Plan	Plan	Plan

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# Annex 11:

## Recommended financial sustainability indicators

Dimension of financial sustainability	Indicator	Unit	Explanatory notes
Self-sufficiency	National operating expenditures: national expenditure on the immunization programme-specific operating costs as a share of GDP after adjustment for debt service in a specific year. [Expenditure on programme-specific operating costs/(GDP-debt service)]	%	This indicator captures the recurrent cost financing effort by the national government, relative to the size of the economy ("ability to pay"). GDP and debt service figures are readily available through ministries of finance and global databases.
Self-sufficiency	National capital expenditures: national expenditure on immunization programme-specific capital costs as a share of gross domestic product (GDP) after adjustment for debt service over a five-year period. [Expenditure on programme-specific capital costs/(GDP-debt service)]	%	This indicator captures the capital financing effort by the national government, relative to the size of the economy ("ability to pay"). GDP and debt service figures are readily available through ministries of finance and global databases.
Self-sufficiency	Programme-specific recurrent expenditures paid for with national resources within the past fiscal year divided by total programme-specific expenditures.	US\$ % real spending per capita for trend analyses	Note: Loans taken on a commercial basis that are used to pay for immunization and surveillance costs —items for specimen collection, laboratory testing, etc. (i.e. actually disbursed) would be considered national resources, since principal and interest must be repaid in full at commercial rates. "Concessional" loans, used to pay costs, would be considered to be part national resources and part external. The shares would be determined by the "grant" proportion of the loan, as estimated by the lender.
Self-sufficiency	Programme-specific capital expenditures paid for with national resources within the past fiscal year divided by total programme-specific capital expenditures.	US\$ % real spending per capita for trend analyses	Where information is a barrier to families presenting infants for immunization, the conception and implementation of a communications plan may be needed to generate demand to increase coverage.
Self-sufficiency	Plan of action for demand generation (communications plan) implemented.	Y/N	
Self-sufficiency	Share of caretakers (mothers, fathers and in-laws) knowledgeable about at least one benefit of immunization services.	%	

Dimension of financial sustainability	Indicator	Unit	Explanatory notes
Mobilization and use of adequate resources	Budget line item, policy, or SWAP performance requirement enforced or met.	Y/N	
Mobilization and use of adequate resources	Multi-year financial plan agreed to by the ICC that shows on what funds are expected to be spent, and from where the funds are expected to come.	Y/N	This indicator calls for the “sources and uses of funds” budget that goes along with the multi-year strategic plan that is a requirement of the application for GAVI fund support. Hence, countries that have made successful GAVI applications already have completed it. However, non-fund eligible countries may wish to adopt it. The financial plan called for would be expected to include: (a) a 5-year budget; (b) financing sources indicated; (c) corresponding to the multi-year strategic workplan and performance targets; (d) with commitments from development partners; (e) have approval in writing from the ICC.
Mobilization and use of adequate resources	External partner expenditures and pledges: actual expenditure in the past year expressed as a percentage of the gap between total costs estimated for the multi-year strategic plan and expected national expenditures.	%	This indicator, which seeks to capture the extent to which external partners are contributing to the programme, applies only to the basic portion of the immunization programme shown in the cMYP. A cMYP, including its financial plan, is one of the requirements of the application for GAVI support and must have the agreement of the ICC. A second element of this indicator is the written pledges of the external partners for financial support of the programme for future years, also expressed as percentages of the gap between projected cMYP costs and expected national contributions.
Mobilization and use of adequate resources	Plan to set aside or allocate funds to replace or upgrade capital items essential to the immunization programme (e.g. cold-chain).	Y/N	Part of such a plan might be a depreciation schedule.
Mobilization and use of adequate resources	Well-established financial planning process involving all financiers.	Y/N	This indicator might be demonstrated by documenting that joint planning and budgeting sessions are held involving the immunization programme management and external ICC members. This indicator relates to the agreed financial plan.
Mobilization and use of adequate resources	Percentage of districts with access to services within five kilometres, or travel of 20 minutes or less, irrespective of travel mode.	%	For countries where geographic coverage with health facilities is 100% (such as is the case in many middle-income countries), this indicator could be replaced by the percentage of health centres providing immunization activities.

Dimension of financial sustainability	Indicator	Unit	Explanatory notes
Reliability of resources	The amount budgeted for the programme within the last fiscal year expressed as a share of actual total expenditures (domestic and globally, together and separately).	%	Share means the percentage of the amount budgeted actually expended. We propose spending versus budgeted here, although we realize that there is another step between budgets and spending where problems may arise. That step is often called "allocation", where budgeted (planned) funds are actually made available. If budgeted funds are not expended, then they may not have been allocated or, once they were allocated, they may not have been spent. The indicator will tell managers that one or the other problem has occurred, but not specifically which one. That will require additional investigation.
Reliability of resources	The amount budgeted for recurrent costs within the last fiscal year expressed as a share of actual domestic expenditures on recurrent costs of the immunization programme.	%	
Reliability of resources	The amount budgeted for capital costs within the last fiscal year expressed as a share of actual domestic expenditures on the capital costs of the immunization programme.	%	
Reliability of resources	Actual district recurrent expenditures expressed as a share of the amount budgeted.	%	Note that: (1) this indicator may not apply to countries that do not have decentralized systems; (2) it may be difficult to aggregate at a regional, provincial, or national level. One way to aggregate would be to calculate the percentage of districts that expended, for instance, 0%–50% of the amount budgeted, 51%–75%, 76%–90% and 90% or higher.
Reliability of resources	Existence of laws, statutes, regulations and/or official decrees specifying amounts or allocations to be dedicated to immunization programmes.	Y/N	This indicator is related to, but different from, the next one. This indicator focuses on the legal instrument specifying amounts to be dedicated to immunization programmes, where the next indicator focuses on the existence of a legal instrument on funding of the immunization programme.

Dimension of financial sustainability	Indicator	Unit	Explanatory notes
Efficient use of resources	Purchase of quality vaccines with use of global procurement mechanism or direct procurement with price differential of less than 10% from global price for which the country is eligible.	Y/N	Different countries are eligible for different vaccine prices, depending on the "tier" for which they qualify. Thus, when prices obtained are compared to global prices, a "fair" comparison must be made.
Efficient use of resources	Existence of a training plan (that includes training in both (1) conducting financial assessments, and (2) efficient use of resources), that has been used to conduct training sessions during the past 1–2 years.	Y/N	We suggest that there be specialized training in financing-related topics separate from, but complementary to, other training, such as in vaccine management.
Efficient use of resources	Existence of an accounting system for the immunization programme or a broader accounting system where expenditures can be disaggregated by programme.	Y/N	
Efficient use of resources	Trends in wastage rates over time, by antigen, particularly for OPV, DTP and TT.	%	The argument could be made that wastage of more-expensive vaccines, like hepatitis B or combination vaccines, would be more important to track, given the financial implications of their wastage. [Note: We will consult with experts in immunization programme planning to clarify technical points about wastage that affect this indicator]
Efficient use of resources	Trends of vaccine stockouts, by region.	%	

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# Annex 12:

## District and sub-district data analysis

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# Annex 13:

## Examples of planning strategies and activities for each system component

Objective	Strategy	Key activities
<b>1. PROGRAMME MANAGEMENT</b>		
Establishment of improved laws, policies and regulations governing the quality of immunization services and supporting improved resource mobilization.	Advocacy with key state stakeholders.	1) Conduct an EPI review in 2016, including review of immunization policy and cMYP. 2) Undertake a policy review of immunization services and financing. 3) Conduct a national consultation with MoH, MoF, parliament, public sector, private sector and civil society to disseminate updated policy. 4) Provide periodic briefings on NIP performance to parliament and local elected officials.
Strengthen national capacity to formulate evidence-based policies through regular consultations with main immunization stakeholders.	Develop more effective ways for NRAs, HSCCs, and ICCs and NITAGs to support immunization programmes as part of disease-control programmes and preventive healthcare.	5) Conduct a review of the NRA regulatory capacity and expand core functions from 4 to 6 during the next plan period.
Expand stakeholder base.	Advocacy with all NIP stakeholders.	6) Regularly update the HSSC on developments in immunizations and resource gaps for service delivery. 7) Meet regularly with NGOs, CSOs and private sector leaders at national and sub-national levels.
		8) Expand ICC participation to include more CSOs and academic and private sector representatives.
Provide independent domestic technical oversight.		9) Establish a National Immunization Technical Advisory Group (NITAG) in order to develop recommendations on policy reforms and new vaccine introductions.
Develop high-quality assessments of the status of immunization and VPD disease through establishing systems for immunization planning and monitoring, and evaluation at all levels of the health system.	Develop standard operating procedures for immunization planning and monitoring, and evaluation.	10) Implement systems of annual and quarterly planning review at all levels of the health system, and regular reviews of surveillance performance using standardized protocols that assess clinical, laboratory and data management components.
		11) Implement annual reviews in joint session with health-sector reviews.
		12) Design an annual M&E framework for immunization and track progress during quarterly and annual reviews at all levels of the health system.

Objective	Strategy	Key activities
<b>2. HUMAN RESOURCES MANAGEMENT</b>		
Ensure high quality and coverage of immunization services through placement and retention of trained PHC workers according to MoH standards.	Assess HR staff placement and training needs.	1) Cost priority post vacancies. 2) Determine priority districts for filling vacancies. 3) Review total health service needs in human resources plan.
	Put in place an HR management support programme to ensure high retention of health staff.	4) Develop guidelines for support supervision.
		5) Train district managers on supportive supervision guidelines and reporting system.
	Develop an HR development plan to ensure high-quality immunization services.	6) Implement continuing training programmes for immunization in practice for 250 health workers per year.
		7) Implement middle-level management training programme for managers in 20% of districts every year for the next five years.
<b>3. COSTING AND FINANCING</b>		
Maintain at least 50% of domestic funding of the routine Immunization programme through 2018.	Increase domestic funding for immunization through advocacy, closer links between immunization and health-sector planning, and budgeting processes.	1) Presentation of annual immunization review and budget plans at national health-sector reviews and sub-national planning and budget sessions. 2) Preparation of empirical NIP budget requests. 3) Preparation and presentation of annual NIP investment cases. 4) Conduct annual national consultation with the Ministry of Health and Ministry of Finance to disseminate information on immunization impacts, budgets and financing gaps.
<b>4. VACCINE SUPPLY, QUALITY &amp; LOGISTICS</b>		
Maintain AD syringe use 100% by 2018.	Exclusive use of ADs in every district.	1) Implement AD "bundling" policy with every vaccine in every district.
	Correct AD use in every district.	2) Improve district reporting of AD use.
No stockouts nationally by 2015.		3) Select and purchase equipment to replace 30% of cold-chain each year.
		4) Monitor stock management in every district.
		5) Monitor district stock in national database.
All AD syringes disposed of safely by 2014.	Network of incinerators and waste- management systems.	6) Test sample incinerators, buy incinerators for 50% of districts by 2006, establish collection/management systems.
Achieve EVM for quality assessment score of >80% for all vaccine management indicators by 2018.	Replace 30% of cold-chain equipment every year.	7) Conduct EVM every three years in all districts.
	Vaccine demand monitoring linked with supply.	8) Implement cold-chain and vaccine management improvement plan based on the findings for the EVM.

Objective	Strategy	Key activities
<b>5. IMMUNIZATION SERVICES</b>		
Maintain elimination of maternal and neonatal tetanus	High TT immunization coverage in identified high-risk areas.	1) Strengthen routine immunization through reaching every community in three high-risk districts.
		2) Develop a list of high-risk communities and collaborate with local authorities to ensure all households are registered for health services.
95% coverage DTP3 by 2018.	RED strategy implemented in every district.	3) Establish national database of district indicators.
90% coverage of all antigens by 2018.	Plan to reach all areas at least four times a year.	4) Conduct micro-planning workshops in 100% districts.
		5) Purchase vehicles for mobile visits (one per district).
Introduce two new vaccines within the next plan period (2013–2018)	Develop an evidence base and communication strategy for new vaccine introduction.	6) Conduct burden-of-disease studies for causes of meningitis.
		7) Establish sentinel surveillance for rotavirus.
		8) Conduct policy-maker surveys on timing of vaccine introduction and capacity for resource mobilization.
<b>6. SURVEILLANCE &amp; INFORMATION</b>		
Improved reporting of coverage and vaccine- preventable diseases as measured by standard routine surveillance indicators (AFP rates, neonatal death investigations, percentage suspected measles cases tested, percentage gaps between reported and survey coverage).	Strengthening capacity-building programmes and supportive supervision for routine VPD disease surveillance.	1) Active surveillance in all districts.
		2) Combine measles/polio laboratory support, training, supplies
		3) Active surveillance for AFP, measles, MNT in all districts
		4) Validate the quality and improve the quality of coverage data
		5) Implement coverage surveys every three years.
Strengthen the evidence base for new vaccine introduction and for vaccine impacts.	Establish sentinel surveillance systems.	6) Establish hospital-based surveillance for rotavirus, meningitis and pneumonia
	Conduct sero-surveys.	7) Conduct hepatitis B sero-survey in children under the age of 5

Objective	Strategy	Key activities
<b>7. DEMAND GENERATION &amp; COMMUNICATION</b>		
Increase demand for immunizations as measured by DTP3 >90% and DTP1-DTP3 drop-out <5%. Plus BCG-MCV drop-out <5%.	Improve the evidence base for the design of communication strategies.	1) Conduct a knowledge attitudes and practices study and adopt lessons learned from the study into policy and practice.
		2) Include MNT in key messages on routine strengthening.
		3) Include YF in key messages for routine strengthening.
		4) Develop key message for routine strengthening.
		5) Include messages on improving outreach in communication plan
		6) Develop key message for routine strengthening.
	Build trust and confidence in immunization services through rapid and effective AEFI responses.	7) Involve NITAG, professional associations and ICC in regular updates on AEFI.
		8) Establish AEFI committees in every province and district by 2015
Raise public knowledge about immunization.	Develop and maintain a network of media contacts for the NIP and MoH.	9) Call quarterly press conferences to discuss immunization issues
		10) Produce and disseminate press releases on selected topics.

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# Annex 14:

## Immunization financing glossary

**Community financing:** Refers to many different community-based mechanisms for funding services, including micro-insurance, community health funds and revolving funds for drugs.

**Cost–benefit analysis:** Seeks to value and compare all costs and benefits (measured in US dollars or other currencies) that result from alternative interventions. It can be used to compare two or more different health programmes, such as malaria control and immunization, to see which provides the most benefits per unit cost. That is, it is used to determine which programmes offer the most efficient use of resources.

**Cost–effectiveness analysis:** Compares different ways of achieving the same objective in an effort to identify the least expensive way of achieving that objective. Cost-effectiveness is measured using one outcome, such as number of lives saved or number of children vaccinated.

**Costing:** This is the process of determining how much a programme costs during one year.

**Cost per capita:** This indicator links total immunization cost or resource requirements to total population in the country and provides a sense of affordability of the immunization programme.

**Cost per dose:** This indicator links total immunization cost or resource requirements to the total number of vaccine doses administered.

**Cost per DTP3 child:** The cost per DTP3 is used as an approximation of the value of resources required to immunize a child with three doses of DTP3, and is based on the total number of children under one year-of-age that received their third dose of DTP vaccine.

**Costs:** The value of the resources, both monetary and non-monetary, used to produce a good or service.

**Debt relief:** Refinancing or cancellation of the principal and/or interest payments on loans to developing countries.

**Decentralization:** The transfer of authority and responsibility for public functions from the central government to provincial or district governments.

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**Effectiveness:** The degree to which an activity or programme achieves its objectives. For example, a highly effective polio programme eliminates polio. An ineffective programme does not decrease the prevalence of polio.

**Efficiency:** The ability to achieve objectives for the least cost.

**Expenditure:** The amount of money spent on a good or service during a particular period of time. For example, the amount of money spent on vaccines in a year.

**Financial plan:** The document that results from the financial planning process. A financial plan can help strategic planning and an efficient use of finances.

**Financial sustainability:** GAVI's definition is the following. *Although self-sufficiency is the ultimate goal, in the nearer term, sustainable financing is the ability of a country to mobilize and efficiently use domestic and supplementary external resources on a reliable basis to achieve current and future target levels of immunization performance in terms of access, utilization, quality, safety and equity.*

**Financial sustainability plan (FSP):** A structured approach, first developed for use in GAVI countries, to assess a programme's financing challenges and describe the strategic approach by a government and donors to supporting medium-term and long-term programme objectives.

**Financing:** Refers to the amount and sources of money for an activity or programme. Interchangeable with "funding".

**Financing gap:** The difference between the amount of financing needed to run a programme to achieve programme objectives and the available financing expected from government and partners.

**Financing sources:** Agencies that provide funding for an immunization programme, including governments, multilateral and bilateral agencies, and private donors.

**GAVI:** A public-private partnership that includes national governments, UNICEF, WHO, the vaccine industry and other partners, that focuses on increasing access to vaccines and strengthening immunization programmes in developing countries.

**Health sector:** The portion of a nation's economy and services that deals with health.

**Health sector strategic plan (HSSP):** A plan for delivering health services that describes overall goals and objectives, prioritizes programmes, and serves as a framework for more detailed planning.

**Highly indebted poor countries II (HIPC II):** A programme of accelerated debt relief managed by the World Bank. Countries that meet certain criteria, and adhere to requirements, may receive HIPC II debt relief.

**ICC (interagency coordinating committee):** An ICC is a committee of immunization partners involved in funding and providing immunization services in a country.

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**Indicators:** Measures established to determine how well a programme is performing. Indicators are usually monitored at regular intervals and compared to a standard, or baseline.

**Inflation rate:** The percentage increase, usually calculated annually, in the prices of goods and services.

**Medium-term expenditure framework (MTEF):** The medium-term expenditure framework is a tool for linking policy, planning and budgeting over the medium term (usually three years).

**Microplans:** Detailed planning documents developed at the sub-national, generally district level.

**Millennium Development Goals:** The United Nations adopted eight goals, aiming at eradicating extreme poverty and hunger; achieving universal primary education; promoting gender equality and empowering women; reducing child mortality; improving maternal health; combating HIV/AIDS, malaria and other diseases; ensuring environmental sustainability, and developing a global partnership for development.

**Multilateral agency:** An agency, such as WHO or the African Development Bank, whose membership and governance structure comprises several countries and that acts independently to fulfil its mandate.

**Poverty reduction strategy paper (PRSP):** A document that describes a country's macro-economic, structural and social policies and programmes, in an effort to promote growth, reduce poverty and identify external financing needs. PRSPs are prepared by governments, in association with development partners, such as the World Bank and the International Monetary Fund.

**Programme-specific costs:** Costs that apply only to immunization services, such as vaccines, in-service training and direct programme management.

**Recurrent costs:** Costs that must be paid every year, such as expenditures for salaries, vaccines, fuel, equipment maintenance, staff training and costs of monitoring and disease surveillance. Also called operational costs.

**Resource mobilization:** The process of obtaining the money, personnel and equipment necessary to run an immunization programme.

**Resource requirements:** Financial (e.g. money) or non-financial (e.g. trained staff) inputs needed for an immunization programme to operate at anticipated levels.

**Sector-wide approach (SWAp):** An organizational approach, used by some governments, in which donor support and funding is pooled to support a comprehensive vision for the health sector.

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**Shared costs:** Cost of resources that are shared among multiple health services, such as the costs of health facilities and staff, that provide immunization services, as well as other health services.

**Social mobilization:** Refers to actions, such as advocacy and community education, that raise awareness among people and influence them, so that they have their children immunized.

**Sub-national:** Levels of government below the national or central government.

**Supplementary immunization activities (SIAs):** Immunization activities conducted in addition to the routine immunization programme. For example, campaigns to eliminate polio.

**UNICEF:** United Nations Children's Fund; a United Nations agency that focuses on the rights of children worldwide. One of UNICEF's priorities is childhood immunization.

**Unit cost:** The cost per item; in this case, the cost per dose of vaccine.

**Useful life:** In capital costs, the length of time a product (e.g. a vehicle or refrigerator) can be anticipated to operate before it is likely to need replacing.

**User fees:** Fees charged to users of goods or services. For example, fees charged to patients for curative services. User fees are not recommended for immunization programmes.

**WHO:** World Health Organization; the United Nations agency for health.

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# Annex 15:

## Immunization planning glossary<sup>\*,†</sup>

**Acceptability:** The extent to which a service meets the standards and cultural needs of a community. Acceptability of immunization services can be assessed through KAP studies.

**Accessibility:** The degree to which services can readily be used by clients. The coverage of first immunization contact (for BCG or hepatitis B birth dose) is often an indicator of accessibility, as it demonstrates the services can be readily used.

**Audit:** The process by which the appropriateness of operations and activities of an organization are examined. This can include financial audits, technical audits or data quality audits. All are applicable in the immunization context.

**Accountability:** Obligation for a manager of resources to demonstrate that work has been conducted in compliance with established plans, budgets, rules and standards, and to report fairly and accurately on performance results. It includes responsibility for the justification of expenditures, decisions or results of the discharge of authority, and official duties, including duties delegated to a subordinate unit or individual.

**Baseline:** Data that describe the situation to be addressed by a programme, sub-programme or project, and that serve as the starting point for measuring performance. A baseline study would be the analysis describing the situation prior to the commencement of the programme or project, or the situation following initial commencement of the programme or project, to serve as a basis of comparison and progress for future analyses.

**Benchmark:** Reference point or standard against which performance or achievement can be assessed. A benchmark often refers to an intermediate target to measure progress within a given period, as well as to the performance of other comparable organizational entities.

**Beneficiary:** The individual, group, or organization, whether targeted or not, that benefits, directly or indirectly, from the implementation of a programme, project or output.

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<sup>\*</sup> Source of monitoring terms: United Nations monitoring evaluation and consulting division ([http://www.un.org/Depts/oios/mecd/mecd\\_glossary/index.htm](http://www.un.org/Depts/oios/mecd/mecd_glossary/index.htm)).

<sup>†</sup> Systems definitions: WHO systems thinking ([http://whqlibdoc.who.int/publications/2009/9789241563895\\_eng.pdf](http://whqlibdoc.who.int/publications/2009/9789241563895_eng.pdf)).

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**Civil society organizations (CSOs):** Organizations which are not part of the government, but which provide a public role and are not profit orientated.

**Coverage rates:** The proportion of an estimated target population which has been reached.

**Criteria:** The standards used to determine whether or not a programme or project meets expectations. Criteria are also used to set priorities based on strategic values, efficiency, equity, impact and feasibility.

**Data source:** The origin of the data or information collected. Data sources may include informal and official records, individuals, documents, etc.

**Effectiveness:** The extent to which a project or programme attains its objectives and expected accomplishments, and delivers planned outputs.

**Efficacy:** The extent to which a specific intervention or service can provide a beneficial result under ideal conditions. The efficacy of a vaccine is an example of this.

**Efficiency:** A measure of how well inputs (funds, expertise, time, etc.) are converted into outputs.

**Equity:** Refers to fairness or justice in service provision or programming. *Horizontal equity* refers to treating people with the same needs equally, and vertical equity means that people with unequal needs should be treated unequally.

**Evaluation:** A process that seeks to determine, as systematically and objectively as possible, the relevance, effectiveness and impact of an ongoing or completed programme, project or policy in the light of its objectives and accomplishments.

**External evaluation:** An evaluation performed by entities outside of the programme being evaluated. In general, it is intergovernmental organs that commission such evaluations and receive final reports on them. As a rule, external evaluation of a project, programme or sub-programme is conducted by entities free of control or influence by those responsible for the design and implementation of the project or programmes.

**Feedback:** A process consisting of the transmission of relevant information from monitoring and evaluation exercises to targeted users so as to facilitate learning and decision-making. Such information usually comprises findings, conclusions, recommendations and lessons learned.

**Formative evaluation:** Sometimes known as interim evaluation, it is conducted during the implementation phase of projects or programmes to improve their performance. Formative evaluations may also be conducted for other reasons such as compliance, legal requirements or as part of a larger evaluation initiative. It is intended for managers and direct supporters of a project.

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**Frameworks for planning:** An overall reference point for setting priorities and organizing strategies and actions according to discrete areas of activity. In the context of immunization, the internal framework could relate to the seven immunization system components. The external framework could relate to the national health sector plan or national development plan.

**Goal:** The higher-order aim to which a measure is intended to contribute; a statement of longer-term intent. In planning terminology, the goal usually refers to the highest level achievement of the project or programme. In the context of immunization, this is usually prevention of mortality, morbidity or disability.

**Health system:** Consists of all organizations, people and actions whose primary intent is to promote, restore or maintain health.

**Health system building blocks:** The various components of the health system that interact and connect to form a complete system. The various blocks are considered to be: service delivery; health workforce; health information; medical technologies; health financing, and leadership and governance. In some contexts, “community systems” are also considered as distinct connecting sub-systems.

**Human resource management:** Comprises the collective management effort for ensuring adequate human resource numbers, distribution, and mix of staff of sufficient quality, who are adequately motivated and supported to achieve organizational objectives.

**Immunization system components:** Refers to the seven components of immunization, which reflect a direct relationship with the health-system building blocks. This includes: programme management; human resources management; financing and costing; vaccines and logistics; immunization services; surveillance and information; demand generation, and communication and advocacy.

**Impact:** The overall effect of accomplishing specific results. In some situations, it comprises changes, whether planned or unplanned, positive or negative, direct or indirect, primary and secondary, that a programme or project helped to bring about.

**Indicators:** A measure, preferably numerical, of a variable that provides a reasonably simple and reliable basis for assessing achievement, change or performance. A unit of information measured over time that can help show changes in a specific condition.

**Inputs:** Personnel, finance, equipment, knowledge, information and other resources necessary for producing the planned outputs and achieving expected accomplishments.

**Internal evaluation:** Evaluation that is managed and/or conducted by entities within the programmes being evaluated.

**Leadership and governance:** Ensuring strategic policy frameworks, combined with effective oversight, coalition building, accountability, regulations, incentives and attention to systems design.

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**Milestones:** Milestones describe the shorter term and concrete steps to be undertaken towards achieving the longer-term objectives of the programme. Collectively, milestones and targets should be monitored using an agreed national M&E framework with agreed indicator definitions.

**National development plan:** Refers to the overall development strategy of government and society. The national development plan may have overarching strategies and goals to which the health sector and immunization can specifically contribute, including poverty alleviation, economic growth, human resource development and inequality reductions. The investment case for immunization is stronger, the more the cMYP can link to this plan or to a related strategy.

**Needs assessment:** Collecting information on community knowledge attitudes and practices and on the pattern and causes of illness, and matching these findings to the existing services, in order to set priorities for service development.

**Objective:** Description of an overall desired achievement involving a process of change and aimed at meeting certain needs of identified end users within a given period of time. A good objective meets the criteria of being impact oriented, measurable, time limited, specific and practical. The objective is set at the next higher level than the expected accomplishments.

**Outcome:** “Outcome” is used as a synonym of an accomplishment or a result. Objectives relate to programme coverage, and should be measured by programme outcome indicators (e.g. percentage DTP3 coverage) or programme output indicators e.g. (e.g. percentage posts filled, percentage of vaccines nationally funded).

**Output:** A final product or service delivered by a programme or project to end users, such as reports, publications, servicing of meetings, training, advisory, editorial, translation or security services, which a programme is expected to produce in order to achieve its expected accomplishments and objectives. Outputs may be grouped into broader categories, for example, human resource outputs, cold-chain and logistics outputs, surveillance outputs, etc.

**Operational planning:** Refers to planning for recurrent activities of systems or programmes, and usually links directly with service delivery or management support for service delivery.

**Priority setting:** Refers to criteria for health priority setting — efficiency, equity, impact, feasibility, link to a national health programme (NHP).

**Programme management:** Refers to leading, organizing, resource mobilization, problem solving and directing through a system governed by rules and procedures. In the immunization context, programme management involves exercising these functions across the seven immunization system components. The procedures and rules include law, policy, guidelines and standard operating procedures.

**Proxy indicator:** Proxy indicator is used when it is difficult to identify direct indicators to measure the result. Proxies are indicators that may tell us indirectly whether a result has been achieved.

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**Qualitative data:** Information that is not easily captured in numerical form (although qualitative data can be quantified). Qualitative data typically consist of words and normally describes people's opinions, knowledge and attitudes or behaviours.

**Quantitative data:** Information measured or measurable by, or concerned with, quantity, and expressed in numerical form. Quantitative data typically consist of numbers.

**Regulation:** Referred to broadly as government interference in the functioning of markets. More specifically, bureaucratic measures, such as procedures or rules, backed up by laws or economic incentives or taxes.

**Reliability:** Consistency or dependability of data and evaluation judgements, with reference to the quality of the instruments, procedures and analyses used to collect and interpret evaluation data. Evaluation information is reliable when repeated observations using similar instruments under similar conditions produce similar results.

**Sample:** The selection of a representative part of a universe in order to assess parameters or characteristics of that universe. Random sampling is the selection of a group of subjects (the sample) from a larger group (the population or universe), so that each individual, or other unit, is chosen entirely by chance.

**Situation analysis:** The initial planning step that includes identification of strengths and weaknesses of programme performance. A situation analysis identifies threats and opportunities to achievement of programme goals, through examination of both internal and external factors contributing to programme outcomes.

**Stakeholder:** Agencies, organizations, groups or individuals who have a direct or indirect role and interest in the objectives and implementation of a programme or project, and its evaluation. In participatory evaluation, stakeholders assume an increased role in the evaluation process as question-makers, evaluation planners, data gatherers and problem solvers.

**Strategy:** The strategy in any planning process normally refers to the description of the action that will describe how planning goals or objectives will be achieved.

**Supportive supervision:** A style of management focussing on problem solving, staff support, on-the-job training and feedback, and client involvement. It is contrasted with traditional styles of management support that focus on command, checklists and correction.

**Sustainability:** The ability to maintain a system over time in such a way as to achieve programme goals with resources that are likely to be available.

**System and stakeholder networks:** Understanding and managing system stakeholders; the web of all stakeholders and actors, individual and institutional, in the system, through understanding, including and managing the networks.

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**Systems thinking:** Systems thinking is an approach to problem solving that views problems as part of a wider dynamic system. Most systems are self-organizing, tightly linked and constantly changing, and are governed by feedback.

**Strategic planning:** Long-term planning (3–5 years). cMYP is an example of strategic planning.

**Target:** A specified objective that indicates the number, timing and location of what is to be achieved.

**Target group:** The main beneficiaries of a programme or project that are expected to gain from the results of that programme or project. They are closely related to its impact and relevance.

**Triangulation:** The use of three or more methods to conduct an evaluation or substantiate an assessment. By combining multiple data sources or methods, evaluators seek to overcome the bias that comes from single informants and single methods.

**Validity:** The extent to which the data-collection methods or tests accurately measure what they are supposed to. Valid evaluations are ones that take into account all relevant factors, given the whole context of the evaluation, and weigh them appropriately in the process of formulating conclusions and recommendations.



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