Terms of Reference

National Economic Impact Evaluation of the Clean India Mission

- ☐ Study *(an initiative to establish current knowledge around a specific topic through the descriptive summarization, interpretation or assessment of information and data)*
- ☐ Research *(systematic process of the collection and analysis of data and information, in order to generate new knowledge, to answer a specific question or to test a hypothesis)*
- ✓ Evaluation *(rigorous, systematic and objective process in the design, analysis and interpretation of information to answer specific questions)*

IR# Type IR# and description here and Activity no. :

Output 301: 3.a.a- By 2022 Government and partners are able to plan and implement the delivery of equitable, gender responsive, quality hygiene and safe sanitation services at scale, for households in the most vulnerable and deprived communities.

WBS: 3040/A0/300/301/004 – Sanitation

1. Background

In 2015, there were 2.3 billion people worldwide who lacked access to a basic toilet and 4.9 billion people who lacked access to a safely managed service (WHO/UNICEF, 2017). Of the 892 million people practising open defecation worldwide in 2015, about 520 million of them were in India of which majority (490 million) were in rural areas (WHO/UNICEF, 2017). Open defecation and lack of safe fecal management is a serious public health concern (O'Reily, Dhanju, & Goel, 2017) that leads to the death of around 117,000 children under-five every year in India, according to UNICEF's 2016 annual report on sanitation. Increased coverage and usage of toilets to a level that significantly reduces the risks of disease transmission can solve this issue (Garn et al., 2017). In addition, lack of private place to defecate is a major social issue, affecting the dignity and security of hundreds of millions of women and girls in India. This understanding led to one of the biggest sanitation campaigns in India, the Swachh Bharat Mission (SBM) or 'Clean India Mission'.

The Government of India (GOI) launched the Swachh Bharat Mission (SBM) on October 2014 for making India open defecation free (ODF) by 2nd October 2019. Swachh Bharat Mission-Gramin (SBM-G) aims to accelerate sanitation coverage and toilet use, eliminate open defecation, promote overall cleanliness and develop safe hygiene practices in rural India. It also aims to motivate communities and Panchayati Raj Institutions (PRIs), governance mechanisms for villages and local leaders, to make and sustain their gram panchayats (GP) as ODF (Government of India Ministry of Drinking Water and Sanitation). Under SBM-G, construction of individual household latrines (IHHLs) were accelerated by providing financial incentives to eligible households (HHs). Since the launch of SBM in 2014, 28 states and union territories and 601 districts have declared themselves to be ODF, resulting into a steep increase in rural sanitation coverage from 38.7 per cent in 2014 (MDWS MIS

Baseline) to 93.1% per cent in February 2019 (NARSS 2018-2019[1], Ministry of Drinking Water & Sanitation).

To achieve this result, it is estimated that the Government of India invested US$ 20 billion and its partners at least US$ 2 billion for sanitation interventions across the country (Toilet Board Coalition, 2017). Households have also invested heavily in toilets, many taking loans to pay the upfront cost.

This current evaluation aims to estimate the national economic impact resulting from the drastic increase in sanitation coverage and achievement of ODF status throughout India which have been made possible by the massive political, human and financial investments. There are many key stakeholders involved who have played an important role to deliver the mission.

2. Rationale

Why is the evaluation necessary?

In the context of the SDGs, the Swachh Bharat Mission (SBM), or Clean India Mission, is a unique example of successful sanitation programming at scale. It is therefore important to know how improving sanitation services at such scale has impacted India's overall economic development, both directly and indirectly, and both in the short-term and long-term. This will inform future national policies in India and in other countries inspired by the SBM, ensuring that sanitation is factored into the economic development equation and related decision-making processes.

What is it intended to answer?

The purpose of the evaluation is to contribute to a greater understanding of the economic and financial impacts at national level of improving sanitation and hygiene practices in India. The specific aims of the present study are to:

1. Estimate what are the likely economic and financial impacts of the SBM at national level.
2. Make recommendations for the future implementation of WASH programmes based on the evaluation findings on the key determinants of economic and financial impact.
3. Based on the implementation costs of the observed SBM interventions, estimate the efficiency of sanitation and hygiene interventions using value-for-money measures

Why conduct the evaluation now?

In 2019, India is expected to be declared ODF allowing for national economic impact estimates looking at achievements in rural and urban areas and aggregated to national level. It will draw on the numerous data sets, studies and other documentation available on sanitation and hygiene in India, and related impacts across strategic sectors (e.g. water, health, education, environment and tourism) and impacts on key population groups, most notably women, children and the poor.

The findings from this study will highlight the potential gains of investing in such large scale programmes to eliminate open defecation.

[1] The National Annual Rural Sanitation Survey (November 2018 - February 2019). Key findings: 93.1% of households were found to have access to toilets during the survey period; 96.5% of the people who had access to toilets used them. Open Defecation Free (ODF) status of 90.7% of villages which were previously declared and verified as ODF The NARSS also re-confirmed the districts/States.

Based on the success of the SBM, the Government of India is now investing in sustainability measures of ODF and safe fecal management, including the management of both solid and liquid wastes. The findings from the evaluation will suggest to what extent it will be important to invest in sustainability measures to maintain the socio-economic gains through time and to further develop the sanitation value chain and sanitation services meeting the aspirations of communities.

3. Objectives

Primary objective:

- Estimate what are the likely economic and financial impacts linked to the outcomes of the SBM at national level, now and in the future.

Secondary objectives and key variables:

- Estimate the potential impact of the SBM on public related aspects, notably:
  - on improving public health considering avoided mortality and morbidity related to fecally transmitted infections and nutrition aspects notably the potential reduction in stunting and wasting affecting children
  - on time saved with a focus on gender equity
    - for having a toilet at home compared to OD/use of community toilet
    - due to morbidity avoided
  - on improving work productivity and wages linked to the potential decrease of the prevalence of fecally transmitted infection
- Estimate the full potential provided by the SBM on the Sanitation Economy considering:
  - Sanitation and hygiene market value and Sanitation circular economy - value of reuse / recycling
  - impact on employment/livelihood
  - Increase in business and foreign direct investment benefit (more companies willing to invest in India due to the better cleanliness and health of the population following the SBM)
  - Increase in tourism related revenue with more visitors coming to India, notably visitors from higher social status (qualitative tourism), and more Indians visiting their iconic places and other places of interest
  - Increased investment of public and private banks on sanitation (e.g. loans to households; supporting investment from the private sector)
  - Increased property value, for households/institutions/public and private places having a new toilet/sanitation facilities in the context of the SBM.

4. Scope of Evaluation

Geographical coverage: The evaluation will be mostly done through secondary analysis of available data from other studies at the national level. It will also cover primary data collection and analysis in states like Maharashtra, Gujrat, Madhya Pradesh and others where UNICEF field office is currently implementing Sanitation program. Note that the specific states for primary data collection will be confirmed during the inception phase, in agreement with UNICEF.

Time period: The evaluation will cover all of the SBM from 2014-2019.

5. Evaluation Questions

The evaluation will be guided by the following questions, under each of the 'OECD-DAC Criteria for Evaluating Development Assistance'. Note that given the objective and purpose of this evaluation, emphasis will be placed on the OECD-DAC criteria of 'Efficiency' and 'Impact'. In addition, the criteria of 'Relevance' will not be addressed, as this is already a given for a policy at scale.

Effectiveness

1. To what extent did the SBM achieve its intended outcomes, including intermediate outcomes such as access and use of toilets, and final outcomes such as reaching Open Defecation Free status?
2. What were the major factors influencing the achievement of these outcomes?
3. To what extent did the results of the SBM succeed in addressing the gender and equity gaps in access to clean sanitation?

Efficiency

1. What has been the total investment in the SBM, based on implementation costs?
2. To what extent has the SBM made efficient use of the resources that have been invested?

Impact

1. What has been the economic and financial impact of the SBM at the national level, in terms of cost-benefit, in key domains?
2. In which domains have SBM investments had the highest and the lowest net positive effect? In which domains have SBM investments had a net negative effect?
3. What has been the economic impact of the SBM for specific sub-populations, including women and children, urban vs rural, different income quintiles?
4. What will the economic impact be of SBM at the national level, in terms of cost-benefit, in 10 years' time?

Sustainability

1. Is the current and projected level of investment in WASH sustainable at the national level?
2. In what ways and why might the sustainability of the SBM results be threatened?

6. Methodology

5.1 Overview

The main focus of the evaluation will be on assessing the economic and financial impact of the SBM. Given that the findings of this evaluation will be used by the government to reflect on the SBM in October 2019, when the SBM ends, the methodological scope of this evaluation is very focussed in order to produce robust findings in a very short period of time. First, it is expected that the questions listed under the criteria of, 'Effectiveness', 'Efficiency' and 'Sustainability' will be answered using a light-touch, mostly desk-based methodology, drawing on existing sources and some key informant interviews where existing data is sparse. Second, for the criteria of 'Impact' a detailed methodology, including a mapping of 11 impact areas or sub-studies, has been proposed in this ToR in order to guide bidders.

The methodology draws upon a similar study conducted in 2017, the SBM Cost-Benefit study by Hutton et al. It is expected that the evaluating agency will draw heavily on this study as its source for the methodology and existing data, and we therefore propose that bidders review it closely while preparing their proposals. (See: Hutton, Odhiambo, Osbert, Kumar, Patil (2018). Financial and Economic Impacts of the Swachh Bharat Mission in India, http://unicef.in/Uploads/Publications/Resources/pub_doc20172.PDF)

Overall, the methodology requires a comprehensive desk study based on an exhaustive literature review and in-depth analysis of available data from household surveys and from the sector management information systems (MIS), interviews with experts and key informants, plus field data collection to address certain data gaps. The desk study will draw on the numerous surveys, evaluations and reports listed under the Reference Section of these TORs, as well as additional documents that will be identified during the evaluation by the consultant, UNICEF, the Government of India and other partners.

With an appropriate selection of extrapolation rules for each impact area, the methodology should allow to calculate the benefits of the SBM under 2 different scenarios:

1. An estimate of the aggregate national economic and financial impacts at the current level of achievement of the SBM from 2014 to 2019, broken down by 11 impacts (see Table below). This will reflect the aggregate national economic impact over five years, at 2019 prices, as well as the latest annual impact for comparison with GDP. Under this scenario the base case results will reflect a realistic scenario based on averages values for India (often based on weighted aggregation across States). For variables where the data are weak or informed assumptions have been used, ranges will be produced to indicate the possible variation in the estimates. This will produce both more optimistic and pessimistic estimates of economic impact.
2. An estimate of the projected national economic and financial impacts under a scenario where the SBM achieves additional and sustained results over the next 10 years (until the end of the SDG period), notably in terms of (a) sustaining ODF; (b) universal and safe solid and liquid waste management, including FSM; (c) higher rates of safe recycling and re-use of 'waste' (solid, liquid and human waste); and (d) continued growth in benefits from sanitation markets, tourism and businesses. Note that it is expected that the same sensitivity analysis as outlined in point 1 is conducted around this future estimate.

There will be eleven different sub-studies, drawing on a combination of existing literature and estimates, and supplemented with field studies, as indicated below:

Sub-study	Desk study	Field study/survey
1. Health	✓	
2. Time use	✓	
3. Education	✓	
4. Sanitation markets (inputs)	✓	✓
5. Sanitation markets (outputs)	✓	✓
6. Tourism	✓	(✓)
7. Business	✓	
8. Environment	✓	
9. Micro-finance institutions	✓	
10. Public toilets	✓	
11. Social (dignity, security, cohesion, in particular gender outcomes)	✓	

Where disaggregation is possible for some impacts by States, by different population groups (poor, children, women), rural and urban areas, separate estimates will be made prior to aggregation. However, it is possible that national disaggregation across all impacts will not be possible due to data constraints.

It is further important to note that while the evaluating agency will use the previous SBM Cost-Benefit study as a template, it is anticipated that there will be some key methodological revisions during the inception phase of this evaluation, in order to deliver findings within the very tight timeline that are still robust. As such, during the inception phase, a number of key deliverables as expected with respect to the methodology:

- Mapping of the outcomes and impacts in various domains, drawing on what has been specified below, but also using documents and evidence on SBM to confirm/refine impact indicators and develop testable hypotheses. This mapping should use an appropriate framework (e.g. direct vs indirect impact, individual vs population level impact, etc.), and should estimate the strength of attribution or causality, as well as the degree of overlap or overlapping ratio of the SBM on different impact indicators, to address the concern of double-counting in the estimation modelling (as referenced in subsequent sections).
- Mapping of all of the potential data sources that are available for the evaluation, how they link to the impact indicators and hypotheses established in the previous point, and the quality of these data sources. Weak data sources and indicators/areas without relevant data should be highlighted up front.
- A prioritization framework for selecting which impact indicators and sub-studies are essential for this evaluation, and which can be conducted at a later stage. UNICEF India recognizes that completing all sub-studies robustly may require time and resources beyond the current availability. As such, bidders are urged to present a final list of sub-studies in the inception report, with a fully worked-out methodology and analysis plan for each (drawing on desk-review). The prioritization framework should take into account data availability, data quality but also relevance and importance of impact indicators. For example, it is expected that significant effort should be made to test an important and substantiated hypothesis of the SBM impact, even if data availability if limited. Similarly, it is expected that

that efforts to test a hypothesis that is less substantiated or spurious simply because of data availability or bias, are deprioritized.

- A fully developed economic valuation and aggregation algorithm, to draw the findings from all of the sub-studies together. Guidance is available from the existing SBM Cost-Benefit study; however, it is expected that this analysis plan is adapted and refined for this evaluation.
- For all of the above, it is expected that the assumptions that have been used in either the mapping, frameworks or modelling methods are explicitly stated and substantiated by evidence.

5.2 Health

Summary of main impacts

Households	Government	Private Sector
Saved medical and travel costs (+)	Fewer patients – saved subsidy (+)	Fewer patients – lost revenue (-)
Reduced mortality (+)	Spare capacity gained (+)	Spare capacity gained (+)

(+) denotes net benefit; (-) denotes net loss

Desk review

For the health sub-study, it involves estimating national economic and financial benefits / savings resulting from SBM, following the increase in improved sanitation practices from 2014 to 2019 and projections into the future due to sustained use and ODF+ activities, such as fecal sludge management. The 2017 SBM Cost-Benefit study will provide the basis of the analysis, while the following additional elements will be added for it to be more comprehensive. The table below summarises indicative data needs, data sources and key informants to interview.

- As the 2017 SBM Cost-Benefit study only covered rural populations, then urban populations will be included. No new field studies will be conducted, but instead the rural numbers from the 2017 SBM Cost-Benefit study will be reviewed and adapted to urban areas (reflecting different numbers benefiting from SBM, unit costs, treatment seeking rates, and disease rates).
- Estimates of the national rates of other sanitation and hygiene-related diseases will be made, and associated treatment costs. These include trachoma, helminthes, Hepatitis A and E and scabies, among others. Research will be made into fecal-oral disease outbreaks and the additional public and private costs associated with the emergency response. Other disease burdens will also include undernutrition (stunting and wasting), and the costs of treating it, based on an attribution factor for poor sanitation and hygiene. A similar aggregation methodology will be used as in the 2017 SBM Cost-Benefit study.
- Based on prevalence and incidence of all these diseases, an overall DALY estimate will be made for WASH-related diseases, and how DALYs have changed during the SBM from 2014 to 2019. Also, estimates will be made beyond 2019 for sustaining ODF and going beyond ODF.
- As well as household costs of medical care, the implicit subsidies in the health care services in public clinics (including NGOs/religious providers) will be estimated, as this represents a saving in health system financial costs. It also reflects a reduced use of health system capacity, and hence its availability for patients with other health conditions. This will need an overall rural and urban national estimate for proportion of treatment seeking in public versus private health facilities, and the % cost recovery by patients in public clinics.

- The mortality costs will be re-estimated based on the new WHO study for India on WASH-specific mortality reductions resulting from SBM (WHO & Government of India, 2018)
- The percent reduction in disease rates and mortality due to basic sanitation and hygiene services will be reassessed from the latest meta-analysis, and the India-specific study on mortality from diseases of WASH estimated.
- All prices will be updated from 2017 to 2019 estimates.

As was presented clearly in the previous 2017 study, a distinction needs to be made in the above impacts between financial savings and economic benefits, as well as who these fall on. The previous study presented mainly household-level benefits; however, this evaluation also looks at impact on the health system which will have less income from patient fees, but also have to spend less public money and free the health system capacity for other health conditions. The numbers will be presented in a way that enables clear understanding of the changes in resource flows.

Additional data needs or identified sources	Key informants and experts to interview
National rates of other sanitation- and hygiene-related diseases	Ministry of Health and Social Welfare and those responsible for the HMIS
Average subsidy in public health system as a proportion of total cost (e.g. academic papers on unit costs)	Health economists from academic institution
Economic value of health system spare capacity (from less patients presenting for GIT diseases)	Health research specialists (epidemiology)
National Health Accounts for public versus private spending and public subsidies	
Latest NFHS on treatment seeking rates and under five diarrheal disease rates	
India-specific estimate of sanitation-related mortality reductions as a result of SBM (WHO 2019).	

5.3 Time use

Summary of main impacts

Households	Government	Private Sector
Time saving from less open defecation or use of shared facilities (+)	Tax revenues from more work (+)	Productive gains from employees sick less often (+)
Time saved from less disease (+)		

(+) denotes net benefit; (-) denotes net loss

Desk review

For the time use sub-study, it involves estimating national economic and financial benefits / savings resulting from SBM, following the increase in household toilet use and reduction in time used for finding place of open defecation or traveling to shared sanitation options. Estimates will be for the increases achieved from 2014 to 2019 and projections into the future due to sustained use and ODF+ activities. Added to this is the health-related time gains from section 5.2. Urban populations will be included – based on adjusted rural numbers (reflecting different baseline OD rates and travel times).

Additional data needs or identified sources	Key informants and experts to interview
Urban populations open defecation and use of shared sanitation rates	Slumdwellers international and other NGOs working in slums
Average time use per household member, based on adjusted rural rates	Sulabh international or other public / shared sanitation provider on population access and distances
Information from urban reports on sanitation access and open defecation	

5.4 Education

Summary of main impacts

Households	Government	Private Sector
Higher attendance and enrolment rates and eventual educational attainment (+)	Tax revenues from higher average wages (+)	Better educated workforce, especially women (+)
Better chances of employment (+)	Expenditure on school WASH facilities (-)	

(+) denotes net benefit; (-) denotes net loss

Desk study

A clean, private and convenient sanitation facility at home and in the school has significant benefits for children and their educational attainment, especially girls. Global evidence suggests the right school WASH facilities and modern attitudes towards menstruation leads to less absence during menstruation and eventually less drop-out of girls from school. Also, if environments are healthier with less fecal-oral disease, less school days are lost to disease. In addition, early childhood development matters: when young children have suffered less bouts of diarrhea and do not suffer from enteropathy, as a result they have better nutritional status, their brains develop more fully and this leads to better schooling outcomes. However, these determinants of school outcomes and intellectual developments are some of many others that predict how well children perform at school. Furthermore, linking educational attainment with employment prospects, salary rates and GDP growth presents a challenge, given the many determinants of the eventual productive capacity of individuals. That said, the gathering global evidence is strong enough to suggest an important link between community/school WASH and schooling outcomes, and this study will attempt to map and quantify the different pathways.

Previous studies have approached valuation in different ways. One study in India has estimated impact on the future wages of adults for children who grew up in ODF communities in India, their resulting wages and the additional government revenues from income tax (Lawson and Spears 2015). Also, the 2017 SBM Cost-Benefit study included the value of lost school time from diarrheal disease episodes, valuing their time at half the minimum wage. The new study can draw on these estimates (while avoiding double-counting of the same benefits assessed in different ways), and also add a gender dimension, assessing the gained school days, education attainments and eventual impacts for women in the workforce.

Additional data needs or identified sources	Key informants and experts to interview
School WASH improvements under SBM	MDWS
ODF – wage impact study	Education Ministry

Sanitation – girl school completion study	Education and WASH experts

5.5 Sanitation markets (inputs)

Summary of main impacts

Households	Government	Private Sector
Contribution to toilet costs (-)	Subsidy to households or providers (-)	Sanitation market value (+)
	Tax revenue from sanitation and supply chain sales (+)	Profits (+)
		Value and profits in supply chains (+)

(+) denotes net benefit; (-) denotes net loss

Desk study

Here the 'Input Market' is defined as all the infrastructure and support and communication activities that have been spent on achieving ODF status across India. At a national economic level, the input market can be crudely estimated as what households, government, NGOs and businesses (under CSR programmes) have spent on SBM. Given the input market can be seen as both a cost and a benefit, it needs special care in interpretation when aggregating the results to GDP impact. Investment costs (upfront costs on infrastructure and IEC) are needed as well as continuing costs on sustainability of behaviours, maintenance and upkeep of facilities. One significant source of these estimates will be from the 2017 SBM Cost-Benefit study. As well as these overall values, additional variables are needed for a correct and fuller interpretation of the economics of the sanitation input market (see Field Study). Initially, secondary sources will be sought and key informants interviewed to gain insights into these variables, drawing on key recent reports in the table below.

Additional data needs or identified sources	Key informants and experts to interview
SBM expenditure by category	MDWS
Household spending on toilets and other materials	Ministry of Finance
Projected spending on O&M for sustaining ODF	CSR programme
Projected costs of elements not invested in (e.g. urban sanitation, FSM in rural areas)	MOUD
SBM IEC White paper (Dalberg)	
Credit financing and employability in the WASH sector (Water.org)	
Sanitation Circular Economy (Toilet Board Coalition)	

Field study

The total market value estimates will be supplemented for omitted components and improved given previous estimates have more recent data (e.g. on costs of IEC). Further details of the sanitation input market need to be understood to make conclusions on the real value it adds to the Indian economy (see list below). Once the desk work is completed, a survey will be designed and applied in 12 districts covering States in the 4 sub-regions of India (3 districts per sub-region). A comprehensive district-wide mapping of all service providers will be conducted to fill in the values and information for the below variables (to be finalised in the inception phase, following the desk review).

1. Company size (financial volume, number of employees)
2. Types of services provided (e.g. hardware, installation, construction, operations, desludging) and the degree of consolidation or fragmentation of different service components
3. Number of new versus existing companies working on sanitation market since 2014
4. Prices of different products
5. Profit levels (as % of cost)
6. Proportion of companies paying tax, and their tax rates
7. Sources of start-up capital (loans, spare funds, own funds, etc) (refer to sub-study on financial institutions).
8. Implications of market growth for employment (employees, salaries, predictability of work)
9. Impact on supply chains (e.g. concrete, sand, wood) and sources of these materials, and implied employment impacts

5.6 Sanitation markets (outputs)

Summary of main impacts

Households	Government	Private Sector
Investment and O&M to recycle / reuse human waste and SLW (-)	Subsidy to households or providers (-)	Investment and O&M costs (-)
Value captured by household or sale of waste (+)	Tax revenue from recycle / reuse market (+)	Revenues and profit from sales (+)
	Carbon savings (+)	

(+) denotes net benefit; (-) denotes net loss

The objective of this sub-study is to estimate the value of reuse / recycling as part of the sanitation value chain, and a very necessary component of the future SBM given the detrimental effects of not properly handling waste generated by humans. This study will include both human waste and solid waste. It includes animal waste where it is used in a combined system with human waste, such as a biogas reactor or composting.

Human (and animal) waste

Desk study

This study will be designed based on the Toilet Board Coalition report on the Sanitation Economy in India and other relevant studies (Toilet Board Coalition, 2017).

The study will initially estimate the total human waste that can be captured in India based on per person values, and the alternative ways in which human waste can be captured and processed will be reviewed. Based on review of existing documentation and interviews with experts, the most feasible combination of options will be proposed for how the circular sanitation economy might work and the value it generates, starting from a realistic baseline and projecting a gradual increase over time to reach universal recycling by 2030. The current companies operating in the space (and where), the types of waste capture and distribution will be identified for all India.

Additional data needs or identified sources	Key informants and experts to interview
Toilet Board Coalition report on Sanitation Economy	MDWS
Estimates of total waste produced and nutrient or energy value	Companies engaged in recycling sector

	NGOs supporting sanitation circular economy

Field study

The modelling assessment above will be supplemented with a handful of case studies of actual practice, to estimate the actual value that is generated, the technologies utilised, the recycling/re-use approach and products (feed pellets, compost, energy) and the costs incurred. In terms of the field work, it will be combined where possible with visits made for the sanitation and hygiene market value study in the 12 districts. If there are too few examples from these districts, other locations will be utilised based on key informant interviews that reveal potential case studies. Based on the findings, the potential market value, investment needs and modelled future costs (per option) will be estimated. The case studies will also gather data on the prices, profit levels (%), and estimate subsidies needed (based on consumer willingness to pay), potential carbon savings (net impact), other environmental benefits, implications for employment (employees, salaries, predictability of work) and other knock-on benefit such as supply chain for the materials.

A sample of at least 3 case studies of each of the following:

- Pellet or briquette production (animal feed, energy, housing materials) – 3 examples
- Biogas production at either farm or community levels – 5 examples
- Composting for fertiliser and soil conditioner – 10 community examples

These case studies can include systems that are operated from human waste sourced from individual household toilets and septic tanks (FSM) or from sewerage systems, and in some cases supplemented with animal waste.

Solid waste

Desk study

With a growing economy and consumption of consumer products and disposable containers, solid waste impacts the aesthetics of local communities all over India, as well as global environments (through carbon implications and solid waste finding its way into rivers and the sea/oceans). However, there is also a business opportunity in solid waste, as evidenced by the very significant informal networks of collectors and some degree of recycling and disposal in rubbish dumps or incineration. There are two main options for reducing the solid waste problem:

1. Reduce the consumption of goods that generate solid waste or promote household level recycling of goods (e.g. finding other purposes for plastic bottles, cardboard, etc).
2. Improve the management of solid waste, through direct reuse of materials or recycling (by breaking it down and then reusing or reproducing). For a more efficient process of recycling, separation helps considerably, and can be done at the household, community or plant levels.

This study will address point 2 only, i.e. dealing with the solid waste that should be managed better once households dispose of it. An overall picture of disposal versus recycling needs to be obtained for India, and the improvements that are possible over time.

Additional data needs or identified sources	**Key informants and experts to interview**
Solid waste practices, including existing recycling	Ministry responsible for SWM
Solid waste volumes, by material	Companies or municipalities engaged in recycling

Value of recycling, and associated costs	

Field study

Following the desk review, case studies on improved recycling options will be explored for the different waste streams – organic matter, plastic, paper/cardboard, (various) metals, mixed materials, and toxic materials. The business models for recycling will be examined (how to charge the customer, and whether the value obtained pays for the costs). As well as the estimation of the total value of the recycled or reused materials in India, an additional value to be estimated is the cost averted from moving away from traditional solid waste management and dumping practices (e.g. costs to water supplies of leachate; loss of land value; and the environmental dispersion of waste which has implications for aesthetics, businesses and tourism – link to other sub-studies).

5.7 Tourism

Summary of main impacts

Households	Government	Private Sector
Employment opportunities and related income (+)	Investment into tourist sites (-)	Increased revenue from tourists (hotels, restaurants travel, etc) (+)
	Direct income from government operations in tourism (travel, entry fees) (+)	Investments in increasing capacity for increased tourist numbers (-)
	Tax revenue from businesses operating in tourism and increased employment (+)	

(+) denotes net benefit; (-) denotes net loss

Desk study

The objective of this sub-study is to estimate the potential increase in revenues from tourism which could be attributed to as better reputation of India and increased attractiveness of touristic sites due to improved hygiene and cleanliness. This sub-study will draw on the trends in tourist visits and revenues, using notably the publications from the Ministry of Culture and Tourism and with a focus on the 21 iconic tourist sites of India as well as other popular locations (e.g. beaches, mountains). A questionnaire will be prepared to send to managers of different tourist sites, with follow up interviews with tourists to explore the responses and deepen understanding. Given the time constraints and small scale of this sub-study it is expected that sampling will be highly purposeful and opportunistic, with very small numbers e.g. 50 very brief interviews/surveys with tourists.

Based on the results, the study will estimate the expected net increase in revenues from tourism and the impact on profits and employment in the tourism industry. Depending on the nature of the businesses and the tax (collection) rates, the increase in tax revenues can be estimated. Given that investments in infrastructure and services are needed to generate more revenues, some care is needed in interpreting the economic figures. For estimation purposes and to allow appropriate interpretation, the data in the Table 1 below are needed.

To estimate the proportion of the increase of tourism revenues that can be attributed to improved cleanliness (and perceived cleanliness/reputation), and other variables, key informants interviews will be conducted, notably of travel agents, experts from the Ministry of Tourism and managers of

Swachh Iconic Sites. Previous studies conducted by the World Bank in SE Asia can be drawn on, which attributed 5-10% of the tourist number gains due to improved sanitation across the countries (The World Bank, 2008).

The study will consider the heterogeneity of tourists, given there are different implications of Indian and foreign tourists, different spending categories and profit levels, with different implications for employment and how profits are redistributed (e.g. repatriated). Therefore, where possible, breakdown will be made of hotel ownership, locations / states (intra-India distribution of gains), and the main items (e.g. hotels, entertainment, travel, food, souvenirs).

Table 1: Additional data needs or identified sources

Additional data needs or identified sources	**Key informants and experts to interview**
Current tourist numbers (Indian, foreign)	Ministry of Culture and Tourism
Additional tourist numbers (evolution over time)	Tour operators
Indian tourists who stay in India instead of going overseas	Managers of tourist sites
Change in tourist profile (spending per day, locations of visit)	
Average spending per tourist, by category	
Average profit margin, by category	
Number of jobs created / sustained	
Tax revenues generated for local and national government	
Reduced sanitation-related disease events and associated medical cost savings and time gained	

5.8 Business

Summary of main impacts

Households	**Government**	**Private Sector**
Employment opportunities and related income (+)	Tax revenues from increase business revenues and profits and employment (+)	Increased foreign direct investment (+)
		Improved business environment for Indian businesses (+)

(+) denotes net benefit; (-) denotes net loss

Desk study

A cleaner and safer environment is good for business. Once India's reputation improves following the success of SBM, more companies will invest in India. This includes Indian companies investing in India instead of abroad, or expanding their operations to parts of India previously considered off limits, and foreign companies investing in India (FDI) instead of other countries.

One signal of the economic impacts of a cleaner environment are the increase in property prices. But these of course have multiple determinants. The reasons are clear: managers and employees prefer to work in a location that is clean, the business has to pay less to access clean water (if it is heavily reliant on water for their business), they can enjoy a functioning waste disposal service, and their clients (whether a wholesale or retail business) prefer to visit them in the selected location, and so on. However, it is challenging to isolate these specific impacts and quantify them, especially across

such a large and diverse territory as India. Hence, the study will focus on foreign direct investment in terms of its size, increase over time, and its determinants. Review of documents and key informant interviews will allow development of a methodology to make a nationwide estimate of the total value brought about by business development resulting from the successes of SBM. There will be some overlap with the tourism impacts, as there will be more business people also enjoying the tourist sites, and some of the FDI will be directed to the tourism industry.

Additional data needs or identified sources	Key informants and experts to interview
Current FDI, by sector	Ministry of Trade and Commerce
Projected changes in FDI over time	Foreign business representatives (associations)
Attribution of FDI increases to SBM success	

5.9 Financial institutions

Summary of main impacts

Households	Government	Private Sector
Households gain funds to construct toilet (+)	Subsidies provided for poor households to access loans (-)	Loan made to households and service providers (-)
Repayment of loan with interest (-)	Tax revenue from increased business and employment (+)	Repayment of loan with interest (+)

(+) denotes net benefit; (-) denotes net loss

Desk study

The SBM has contributed to transform the financial sector of India with financial institutions (public and private banks) being better equipped/informed and willing to support investments in the sanitation sub-sector notably through micro-finance initiatives aiming at providing affordable WASH loans to households and by supporting investments from the private sector for sanitation services

To estimate the financial benefits in the financial sector, it is proposed to analyse existing documentation notably the reports from Water.org on credit financing for WASH and to conduct interviews with key informants, such as Water.org. The current total market value from 2014-2019 will be estimated, as well as projections to the future, and the implied impact for employment. Implications for the future, with SBM having opened this market in the financial institutions.

Additional data needs or identified sources	Key informants and experts to interview
Current and historic lending to households and service providers for sanitation	Water.org
Projected needs for loans for sanitation in the future	Staff from banks and micro-finance institutions that have engaged in making sanitation loans
Annual reports of MFIs	

5.10 Environment

Summary of main impacts

Households	Government	Private Sector
Property value (+)	Saved water access / treatment costs of government-run utilities (+)	Property value (+)

Cleaner water available for drinking and less HH treatment needed (+)		Cleaner water available and less treatment needed (+)
More accessible clean water supply for irrigation (+)		

(+) denotes net benefit; (-) denotes net loss

Desk study

The benefits to the environment are running through many of the above impacts. However, there are additional impacts which are critical for India.

One is property value, which is highly sensitive to the cleanliness of a location. This is partially covered under business and tourism impacts. In the 2017 SBM Cost-Benefit study, households were asked how much they thought their property value increased due to having a household toilet, and overall the increase in value closely mirrored what they invested in the toilet. However, with property value increases there will be winners (seller or landlord) and losers (buyers), hence the societal benefit balances out and while there are implications for asset values on balance sheets, there is limited impact on GDP. However, it is undeniable that changes in property value can signal the value of a clean environment.

A second critical aspect not covered fully above is the impact of SBM on water quality. While water quality has several determinants other than sanitation practices (agricultural practices, deforestation, erosion, business activity such as mining and release of untreated wastewater into surface waterways). Hence with the full implementation of SBM, especially point sources in cities (e.g. municipal sewer outlets), the rivers and lakes are likely to be significantly cleaner, especially in densely populated rover basins. This has significant implications for farmers (who might switch to using surface water rather than pumping groundwater), businesses (who do not have to treat intake water) and communities, and reduce costs of clean water access. Through a comprehensive review of water and water quality monitoring data, project reports and key informant interview, an assessment will be made of what the likely impacts are, both in terms of water quality impact throughout India as well as economic implications.

A third aspect which should not be forgotten is the value of the environment for non-human benefit. A cleaner environment, such as cleaner land and water and less toxic materials and pathogens, allows nature to flourish. Biodiversity is important for humans, but it also has a value in itself. It is likely that this topic will be the subject of future studies given the many challenges inherent in valuing nature, although the benefits should be referred to in the evaluation report.

Additional data needs or identified sources	**Key informants and experts to interview**
Water quality data of rivers, groundwater and reservoirs	MDWS
Impact of cleaner water on farmer, utility and household access and treatment practices	Ministry of Water Resources
	Ministry of Agriculture

5.11 Public toilets

Summary of main impacts

Households	Government	Private Sector
Less fees paid to public toilet providers (+)		Less income from household that now have household toilets (-)

(+) denotes net benefit; (-) denotes net loss

Desk study

Under SBM public toilets have received further investments from both government and toilet operators (NGO and private) to ensure people have a place to go when away from home. In the 2017 SBM Cost-Benefit study survey, household indicated they make savings on spending less on shared or public toilets. With the current study expending to urban areas, this impact will be even greater. Hence, for their daily needs while at home, household members will need to spend less on public toilets, which will lead to a household saving but a loss for public toilet providers This is likely to be made up for by the increased demand from people who are away from home. There will be winners and losers. Hence a review of available documentation will be conducted, and interviews with key informants, in particular large-scale providers of public toilets (e.g. Sulabh).

Additional data needs or identified sources	Key informants and experts to interview
Public toilet income	Public toilet providers
Practices of household members and continued use of public toilets	Municipalities

5.12 Social outcomes

Summary of main impacts

Households	Government	Private Sector
Dignity, security, community cohesion (+)	Population appreciative of SBM success (+)	WASH in the workplace leads to healthier more motivated employees (+)

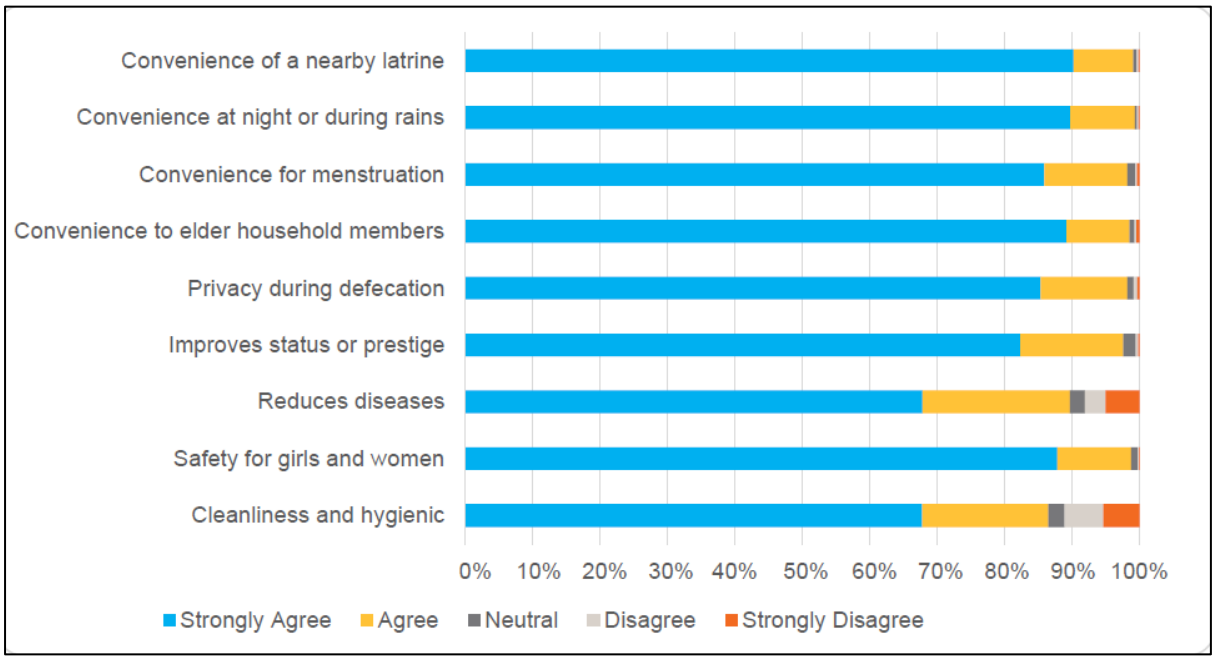
(+) denotes net benefit; (-) denotes net loss

Desk study

While all the previous impacts attempt to quantify impacts in monetary values, not all impacts are easily amenable to determining such values. Issues such as dignity, security and comfort are often the driving forces that motivate households, especially women, to demand a household toilet. As a result of a sanitation campaign and community actions, it can lead to greater social cohesion, which makes community members more likely to collaborate in the future. However, these benefits often remain hidden due to the difficulty of measuring these outcomes (requiring research), and the status of women (not being the main decision maker on matters of household investments). Also, many of these benefits cannot easily be monetised and are hence omitted from cost-benefit analysis studies.

Some survey techniques ask questions on willingness to pay for sanitation. However, the results can be difficult to interpret due to the many factors motivating households to invest, and which are already partially included in the impacts covered earlier. The 2017 SBM Cost-Benefit study asked questions to the main caregiver in each household on issues related to convenience, privacy, status,

health, safety and cleanliness. The responses indicated a high degree of appreciation for a clean, private household toilet (see Figure below). Hence, the new study will use these results and review the latest literature on social outcomes from SBM. While the results on social outcomes such as dignity, security and comfort cannot be aggregated into the wide cost-benefit model, due to the difficulty of monetizing them, it is still important to evaluate them to ensure these issues and arguments are part of the overall messaging on the benefits of SBM and that the gender issues are well reflected.



Additional data needs or identified sources	Key informants and experts to interview
Published studies on social outcomes of SBM, including satisfaction	Ministry of Women and Child Development
	Ministry of Social Justice and Empowerment
	Community leaders

5.12 Aggregation of impacts

The different nature of the impacts makes aggregation challenging, as they differently lead to financial or monetary estimates (or not). However, a total national estimate of the first 10 impacts is sought which will be accompanied by simple messaging around the types of impact included, specific segments of society or population groups impacted most, and distinguishing current impact from future expected impact. Given some of the economic impacts need investment, the presentation should show clearly what investments are likely to lead to what impacts. Overlaps in impacts need to be identified to avoid double-counting. For example, when aggregating tax revenue increases for the government with company profits, the latter should reflect net profits to avoid double-counting. In addition, some values are directly financial, some might have a financial impact in a later time period, while others are economic or welfare impacts.

Total economic value created (2014-2019, Average Annual)

Impact	Disaggregation proposed	Who Impacted			Total
		Households	Government	Private Sector	
Health	R/U, Q, gender, age	+++	++	-+	+++
Time use	R/U, Q, S, gender, age	+++	+	+	+++
Schooling outcomes	R/U, gender, age (all children)	++	+	+	+++
Sanitation markets (inputs)	R/U, Q	--	--+	+++	+ / -
Sanitation markets (outputs)	R/U	+-	--+	++-	++
Tourism	S		+	++	++
Businesses	S		+	++	++
Environment	R/U, S	+	+	+	++
Micro-finance institutions	R/U, S	+	-+	+	+
Public toilets	R/U, S	+		-	+ / -
Social	R/U, gender, age				

Key: R – rural; U – urban; Q – income quintile, S - State

One key indicator will be the impact on employment, given the investment and recurrent spending will have implications for jobs, both directly and in supply chains.

New jobs created and sustained (the direct jobs impact and jobs created in supply chains can be disaggregated)

Sector	2014	2015	2016	2017	2018	2019	2020	2025	2030
Sanitation markets (input)	XX	XX	XX	XX	XX	XX	XX	XX	XX
Sanitation markets (output)	XX	XX	XX	XX	XX	XX	XX	XX	XX
Tourism	XX	XX	XX	XX	XX	XX	XX	XX	XX
Businesses	XX	XX	XX	XX	XX	XX	XX	XX	XX
Financial institutions	XX	XX	XX	XX	XX	XX	XX	XX	XX
Total	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX

5.13 Risks and limitations

As already described, this evaluation has a number of potential confounding factors and some risks and limitations.

The current evaluation has many components, which entails desk research of available data and extrapolation of previous findings with the aim of estimating overall national economic impacts now and in the future. It also requires several field studies that will require tailored design to account for the location and quality of the desired information, and the timing and resource limitations.

Four main confounding factors will need to be taken into account when interpreting the results of this evaluation:

1. Other major government flagship programmes by other line ministries and general socio-economic development that have direct impact on economic improvement during the same time period as SBM.
2. Impact on mortality and morbidity due to nutrition mission and growing health coverage of the population.
3. Overlaps of several of the evaluated impacts, which requires caution of double-counting in the aggregation process.
4. Conflating economic and financial impacts. At the start, it should be clear which impacts have direct financial implications, which have delayed financial implications, and which are purely economic values (reflecting population welfare, but which can be monetized using an accepted economic valuation technique).

Some of the limitations of this evaluation are as follows;

1. Data on economic and finances related to health and production might be difficult to obtain
2. At times determination of causality will be based on non-experimental evidence or methods; while this is the best method available, true evaluation of attribution may not be possible
3. The evaluation design has many subsections, which have different study design and methodology. This will be time consuming, and priorities will need to be set.

In order to try and address some of the risks and limitations of this evaluation, it is expected that the agency clearly states the hypotheses chosen and the model chosen for estimating and monetizing outcomes and aggregating the results. In addition, it is expected that the usual quality assurance checks are in place for the statistical data (including conducting a sensitivity analysis of the results). Finally, an Expert Reference Group will be formed to conduct a thorough review of the methodology during the inception phase and the results before the report is finalized.

As mentioned at the beginning of the methodology section, a crucial component of the first deliverable for this evaluation will be a mapping of all of the domain areas and outcomes of interest, along an appropriate framework, that also estimate the degree of overlap or overlapping ratio, agreed upon with justification. This will be a critical component of the accuracy of the modelling technique, and will need to be carefully reviewed and approved by both UNICEF and the Expert Group. During the inception phase, based on a preliminary review of the existing evidence and using this modelling map/framework, it will be decided which sub-studies are potentially unfeasible to conduct, and these can be removed upon mutual agreement. The key stakeholder mapping along with the contributions will also be included in the inception report.

7. Use of the findings

End-users of the findings in India will firstly include officials at the Ministry of Drinking Water and Sanitation and the Ministry of Finance, Government of India. State governments and district officials

would be interested in looking at the finding of this evaluation. UNICEF staff, development partners, researchers and field practitioners.

Findings will provide information for advocacy to influence the ODF S and ODF+ policy and interventions led by the Government of India. This will contribute to ensure that a sustained focus remains on sanitation programme in India so that budgetary and programmatic provisions continue irrespective of achievement of ODF in 2019.

The findings will also feed into the ongoing sanitation plan for India country office 2018-2022, shifting the thrust on ODF sustainability and aligning deliverables by the State teams.

At global level, it is anticipated that this evaluation will have a major impact as well. As India is playing an increasingly important role for the Global Dialogue on WASH and on the SDGs (e.g. the Mahatma Gandhi International Sanitation Convention which brought together 55 Sanitation Ministers and 200 representatives, from 70 countries, in Delhi to reflect on Sanitation Programming), lessons learnt from the implementation of the SBM are having a major influence in other developing countries. In this context, translating sanitation achievements into financial benefits will contribute to a better prioritization of sanitation issues at global level.

Communication and dissemination plan – what activities will you engage in, to communicate the findings:

Key findings and lessons learnt from this flagship evaluation will be disseminated at global, regional and national levels, including to the Indian general public and to state government, to development partners, NGOs and INGOs, corporates, national and international universities, research groups, international development and aid agencies, donor organizations, and international agencies setting global policy.

There is a keen interest for this evaluation at the highest level in the Government of India, including the Prime Minister' Office and the Union Ministry of Finance. The findings can therefore contribute to leverage the Ministry of Finance to sustain funding to the sanitation sub-sector.

Special attention will be given to the dissemination/awareness raising among public and private financial institutions to increase the footprint of micro-finance institutions in the development ecosystem and promote the provision of affordable loans to poorest households to increase access to essential services, notably to water, sanitation and hygiene facilities.

We will use multiple communication strategies to target information to the correct audiences, as appropriate including through face-to-face interactions at workshops, meetings, local forum presentations, and international conference as well as through online networks, webinars, and online news, blogs, and publication portals.

Note that UNICEF will have full rights to any primary data collected, and data protection of primary (and where relevant secondary) data will be ensured through. In addition, for any analysis that has been conducted for this evaluation, UNICEF reserves the right to approve and deny its dissemination outside of the terms set out in this Terms of Reference.

8. Publication plan

The evaluation will be considered for publication in relevant journals such as IJERPH, World Development, Tropical Medicine & International Health, The American Journal of Tropical Medicine and Hygiene, Social Science & Medicine.

If publication is carried out, it will be ensured that the entire plan complies with the ICO guidelines for publications. The link for the guideline is available here; https://unicef.sharepoint.com/sites/portals/RF/Regulatory%20Framework%20Library/OoR%20Guidance%20Note%20on%20External%20Academic%20Publishing%20Policy%2023-%20Jan-2017.pdf

9. Ethical considerations

Ethical considerations will be included in the inception report and the guidance outlined in the *UNICEF Procedure for Ethical Standards in Research, Evaluation and Data Collection and Analysis* and the *UNEG Ethical Guidelines for Evaluation* *will be* followed.

As this evaluation does not require surveys with children, it is anticipated that the ethical implication will be limited; notably the evaluation will probably not require an IRB approval to safeguard the privacy of respondents for necessary data collection. However the agencies on board are required to "clearly identify any potential ethical issues and approaches, as well as the processes for ethical review and oversight of the evaluation process in their proposal".

Some ethical considerations around data collection and data protection will be,

1. Ensure that all data collected is encrypted and confidential
2. Any new data collected from respondents should only be carried out after acquiring oral consent.
3. Any respondent during primary data collection will have the right to stop the survey/interview and withdraw participation
4. Sensitive information collected from female respondents should be carried out specially by female enumerator for any sub-study

The agency on board will also be required to ensure there is no Conflict of Interest in them carrying out this evaluation, including of any sub-contracted entities or consultants.

In addition, and very important for an evaluation of this scope and size (involving a large number of assumptions around analysis and modelling), it is expected that the agency makes substantial efforts to counteract the risk of confirmation bias: it is believed to have generated a huge range of benefits and the method and analysis will be subconsciously oriented to proving that. **Bidders are expected to outline in their proposals what measures they plan to put in place to ensure that bias is avoided and the evaluation remains and objective as possible.**

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11. Major Tasks to be Accomplished

Task	Deliverables	Length of report
Kick off meeting	Signature of contract	
Initial desk review and key informant interviews, detailed design of sub-studies including data collection tools for field surveys and implementation plan	Inception report with annexes A draft ToC of the SBM	25 pages in single space and one sided
Implementation of sub-studies, including further literature review and key informant interviews	Draft synthesis report of findings with 1 short report per sub-study in annexes, each containing introduction, methods, results and conclusions	30 pages synthesis report in single spacing (with executive summary), plus up to 50 pages annexes with sub-study findings
Synthesis of findings and messaging	Short report	10-12 pages
Publication in peer reviewed journal	One publication	Subject to journals

12. Estimated duration of contract

The estimated duration of contract is for 4 months. Once the inception phase is complete, it is expected that the data collection for sub-studies will run parallel to each other, with large teams to stick to stringent timeline.

13. Deliverables, deadlines and payment schedule

End product / deliverable	Timeline	Payments[2]
Signature of contract	24 June 2019	
Inception report with annexes	15 July 2019	20% of fixed fees + reimbursables
Draft report of findings with annexes	15 August 2019	30% of fixed fees + reimbursables
Updated estimates based on feedback for messaging for SBM celebrations	31 August 2019	-
Final report of findings	15 September 2019	40% of fixed fees + reimbursables
One publication draft ready for submission to agreed journal	15 October 2019	10% of fixed fees +reimbursables

The length, structure and content of the final report will be as per UNICEF Evaluation Report Standards (GEROS) and the main sections of report will be further discussed after inception report. The inception and the final report will be reviewed by Senior WASH Specialist (New York), WASH Chief India Country Office, Sanitation Specialist and WASH Officer, Monitoring & Evaluation focal

[2] *All-inclusive fees (including professional fee, travel and subsistence cost) to be filled in by the consultant and/or agency*

point. An Executive Summary is mandatory, and will be approved by an internal steering committee before the report can be finalized.

14. DUTY STATION

Anywhere in India with field-based data collection across a number of states and meetings with UNICEF and the Government of India in Delhi.

15. CONTRACT /PROJECT MANAGEMENT

The contract will be authorized by the Section Chief, WASH Programme, with the endorsement of the Deputy Representative.

The Research & Evaluation Specialist, UNICEF India, will be responsible for managing and supervising the contract, including evaluation of performance, and coordinating invoice certification. The R&E Specialist will enlist the support of the WASH Team, notably the Sanitation Specialist and the Monitoring & Evaluation focal point, for technical inputs.

UNICEF Supply team will remain the focal point for all administrative, financial and commercial queries and correspondence, including contract amendment.

An Expert Reference Group (ERG) will be convened by UNICEF India to provide overall technical oversight for this evaluation. This group will be carefully composed to consist of key internal and external experts in WASH/SBM and economic modelling. Members of the ERG will be responsible for reviewing the proposed methodology during the inception phase and also the preliminary results before the final report is finalized. A full Scope of Work for the ERG will be shared with the contracted agency at the start of the contract.

16. OFFICIAL TRAVEL INVOLVED (ITINERARY AND DURATION)

Official travel will be expected to minimum 5 to 6 UNICEF states subjected to final selection as per the study design

17. AMOUNT BUDGETTED (GRANT & EXPIRY DATE OF GRANT)

- Grant Ref: Non Grant (GC)
- WBS: 2040/A0/06/300/301/004
- Expiry date of the grant: 31 December 2019

18. ADMINISTRATIVE ISSUES

This is not applicable for this contract. Consultant/agency hired will be availing own facilities.

19. QUALIFICATIONS / SPECIALIZED KNOWLEDGE / EXPERIENCE/ COMPETENCIES (CORE/TECHNICAL/FUNCTIONAL) / LANGUAGE SKILLS REQUIRED FOR THE ASSIGNMENT

This assignment will be undertaken by an agency that is primarily engaged in the conduct of evaluation and research studies including extensive experience of conducting surveys and qualitative research, and for this evaluation especially economic modelling.

The selected agency should have a successful track record of conducting high quality literature reviews, as well as designing, implementing, and analysing both quantitative and qualitative surveys with a track record of at least five years of relevant activities in development, health, water and sanitation programs, and significant experience within India. The company must have a substantial research infrastructure to support field-based data collection, electronic archiving of the data and capable of ensuring the highest level of confidentiality for research subjects as well as ensuring the validity of responses obtained.

Agencies are free to associate for this assignment to ensure that sub-studies are conducted simultaneously; it should be stated which agency is managing which sub-study, and what the responsibilities will be of the lead agency. The agencies conducting sub studies should not have any potential conflict of interest.

It is left to individual bids to propose a senior team composition that they feel is best suited for the assignment. However, senior team members should.

- Hold a post-graduate degree in Public or Business Administration /Social Sciences /Engineering /with specialist knowledge and experience of rural water supply and sanitation. Knowledge on gender equality including child rights is added benefit.
- Have clear understanding of government processes and systems
- Be familiar with the MDWS flagship programmes, SBM-G and NRDWP
- Have a minimum of 10 years' experience, with preferably at least five years in the water/WASH sector
- Have solid economic valuation, modelling and data analysis experience with a publications track record
- Have experience in environment (reuse, solid waste management) – at least one senior expert
- Possess excellent verbal and written communication skills (English and Hindi)
- Possess excellent analytical, report writing and presentation skills
- Be proficient in the use computer software. i.e. Windows 8, MS Office, Internet searches, including statistical data analysis software such as Stata or R.

Suggested composition of the expert team:

- A senior economist (team leader); she/he should have the following: at least 10 years experience leading projects in the economics field, including operational research; experience in interdisciplinary work related to water and sanitation; track record of relevant research and scientific publications; at least 5 years project/program management and leadership experience; personal and team skills; experience with quantitative data packages; and good working knowledge of Hindi and English languages. Previous experience in water and/or sanitation programs is preferred.
- A senior health expert and statistician with the following: at least 10 years experience in social science qualitative and quantitative research; personal experience of interviewing and leading focus group discussions; experience in interdisciplinary work, including economic aspects; track record of relevant research and scientific publications; research management and leadership experience; personal and team skills; experience with quantitative data packages; and good

working knowledge of Hindi and English languages. Previous experience in water and/or sanitation programs is preferred.

- A senior Sanitation/WASH Expert with the following: at least 10 years experience in sanitation/environmental engineering, solid and liquid waste management, fecal sludge management, waste water treatment, recycling; good working knowledge of Hindi and English languages.
- A senior research field manager with the following: at least 5 years experience in leading field studies in the social sciences, in both qualitative and quantitative research; personal and team skills; experience with quantitative data packages; and good working knowledge of Hindi and English languages. A track record of relevant research and scientific publications is preferred.

Enumerators must have the ability to interview respondents, facilitate and collect data in English, Hindi and other local languages and translate the research material. The enumerators should have at least two years of experience in field work, be fluent in the necessary local languages and must have completed a high school diploma.

20. TECHNICAL EVALUATION CRITERIA (WITH WEIGHTS FOR EACH CRITERIA)

CATEGORY	MAX. POINTS	MIN. POINTS
1. SPECIFIC EXPERIENCE OF THE FIRM RELEVANT TO THE ASSIGNMENT ▪ Professional expertise, knowledge and experience with similar projects, contracts, clients and consulting assignments (25)	**25**	**18**
2. METHODOLOGY ▪ How effective is the proposed approach and methodology; is it sufficiently detailed/elaborated to meet the objectives of the terms of reference; any innovative techniques; (10) ▪ How is the quality of proposed implementation plan, i.e. how the bidder will undertake each task, is/are person/s assigned for each task and is the team composition balanced with appropriates skills mix and appropriate number of input days, quality assurance mechanisms for the assignment, and time-schedules for implementation (10); ▪ Risk assessment and mitigation measures- recognition of the risks/peripheral problems and methods to prevent and manage risks/peripheral problems. (5)	**25**	**18**
3. PROPOSED TEAM ▪ Team leader: Relevant experience, skills (10) ▪ Team members - Relevant experience, skills (15) ▪ Retention of key staff and procedures for handling unavoidable team changes (3) ▪ Gender balance of the team (2)	**30**	**24**
TOTAL MARKS FOR TECHNICAL COMPONENT	**80**	**60**
4. FINANCIAL PROPOSAL – PRICE ▪ 20 points is allocated to the lowest priced proposal. The financial scores of the other proposals will be in inverse proportion to the lowest price.	**20**	**NA**
	100	**NA**

21. Risk and mitigation

Risk Category / Area	Risk area description/context	Current risk response/control (Description of what the office is doing to mitigate the risk)	Assessment of residual risk			
			Likely-hood (1-5) *1. Unlikely 2. Possible 3. Likely 4. Almost Certain 5. Certain/ Imminent*	**Impact (1-5)** *1. Neglible 2. Minor 3. Moderate 4. Major 5. Critical*	**Risk level*** **Very Low *Low *Medium *High *Very High *Extreme*	**Action Plan to further manage the residual risk (WHAT, WHEN, WHO)**
Market/Service providers Sourcing list and identifying a capable supplier	Poor process for selection of agency	Agencies will be selected through the help of Supply and procurement section. A strict guideline will be adhered to as per S&P's requirement to ensure that the bidding process and selection of agency is done efficiently.	1	1	Very Low	None
TOR	TOR is non comprehensive and vague	The TOR is drafted and shared internally for review and feedback within WASH section. Once internal feedback process was done, it was sent for to SPME section for review. After more iterations its is sent for external review. Feedback from the external review and SPME section will be incorporated in the TOR.	1	1	Very Low	None
Quality Assurance	Lack of clarity in quality assurance	Quality assurance will be specifically focused during the proposal evaluation by Section. Quality assurance mechanism will be explained in the inception report through joint mnitoring visit by section and state staff.	1	1	Very Low	None

22. PERFORMANCE REVIEWS

Interim and final evaluations must be completed and PACE forms filled with scores and comments justifying the scores. Evaluation criteria and indicators should be aligned with the scope of work.

23. [FOR INTERNAL USE] Submitted to External QA review by:

- Name of P.O.:_____
- Signature of PO: _____ Date_____
- Signature of R&E Specialist: _____ Date_____
- Signature of the Section Chief: _____ Date_____

Once clearance from CFO and Section Chief is granted, and Research and Evaluation Specialist has been consulted, submit to external QA review. Once you have received the external review comments, please take the following steps:

- If your TOR **received 60-100%, i.e. satisfactory or highly satisfactory rating** → Finalise ToR with any possible changes, attach the external review sheet to the TOR and submit to Deputy Representative-Programmes for approval
- If your TOR **received 40-59% it indicates the need for substantial changes** → Make the changes, fill out the subsequent section (confirmation of amendments), attach the original TOR, revised TOR and external review sheet, and submit to Deputy Representative-Programmes for approval.
- If your TOR **received 0-39%, i.e. unsatisfactory, the TOR is not mature enough** → Revise the entire TOR and resubmit for external quality assurance review.

A. [FOR INTERNAL USE] Confirmation of amendments:

Undersigned confirm that external review comments have been incorporated in the TOR.

Name of P.O.:_____

Signature of PO: _____ Date_____

Signature of R&E Specialist: _____ Date_____

Signature of the CFO (if applicable): _____ Date_____

Signature of the Section Chief: _____ Date_____

B. [FOR INTERNAL USE] TOR cleared by:

Name of S&P Specialist :_____

Signature of S&P Specialist: _____ Date_____

C. [FOR INTERNAL USE] TOR approved by:

For activities with a budget of <=$50,000

_____

Chief of Section / Field Office

For activities with a budget of >$50,000, or activities which are not in the Supply Plan

_____

Deputy Representative, Programmes