



REPUBLIC OF KIRIBATI

KIRIBATI ROAD REHABILITATION PROJECT

CREATION OF MICROENTERPRISES FOR ROAD MAINTENANCE



INCEPTION REPORT

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CONTENTS

1. Introduction	1
2. Design aspects	3
2.1 Maintenance activities	3
2.2 Microenterprises	4
2.3 Organizational modality	8
2.4 Contracting modality	10
2.5 Procurement modality	12
2.6 Tools and equipment	15
2.7 Materials	17
2.8 Training	18
2.9 Supervision and inspection	19
2.10 Costs and funding	21
2.11 Monitoring	23
3. Work programme	24
3.1 Initial design	24
3.2 Maintenance Manuals	25
3.3 Training	26
3.4 Implementation support	27
3.5 Evaluation	28
4. Required support	29
4.1 Logistical support	29
4.2 Information collection	30
References	32
Annex 1 – Work programme	33
Annex 2 – Questions to be answered	34

TABLES

Table 1	Road lengths in Kiribati (km)	1
Table 2	Road lengths in South Tarawa (km)	22

ABBREVIATIONS

ADB	Asian Development Bank
AUD	Australian Dollar
BAC	Business Advisory Center
BTC	Betio Town Council
CED	Civil Engineering Division
CPD	Cooperatives Promotion Division
DSC	Design and Supervision Consultant
DLP	Defect Liability Period
GoK	Government of Kiribati
IC	International Contractor
KFSU	Kiribati Fiduciary Services Unit
KRRP	Kiribati Road Rehabilitation Project
LB	Local Businesses
LO	Local Organizations
MCIC	Ministry of Commerce, Industry and Cooperatives
MFED	Ministry of Finance and Economic Development
MPWU	Ministry of Public Works and Utilities
PAD	Project Appraisal Document
PMU	Project Management Unit
PRIF	Pacific Region Infrastructure Facility
TUC	Teinainano Urban Council
USD	United States Dollar

1. INTRODUCTION

1. The Republic of Kiribati is one of the most remote and geographically dispersed countries in the world. It consists of 32 low lying atoll islands and one raised coral island in three main island groups scattered over 3.5 million km² of the central and western Pacific (an area roughly the size of Europe). The total population is about 100,000, with almost half concentrated in the urban settlements of South Tarawa. The road system in South Tarawa consists of about 36 km of main roads (including causeways), about 20 km of secondary roads, and about 40 km of feeder roads. The Ministry of Public Works and Utilities (MPWU) is responsible for the main roads, while the secondary and feeder roads fall under the responsibility of the two urban councils in South Tarawa (Teinainano Urban Council and Betio Town Council).

Table 1 Road lengths in Kiribati (km)

Island	Main roads			Secondary roads			Feeder roads	Total roads	Causeways (m)
	Sealed	Unsealed	Total	Sealed	Unsealed	Total			
South Tarawa	31.1	4.8	35.9	10.5	9.1	19.6	40.0	95.5	7,380
Kiritimati	79.4	-	79.4	4.6	102.8	107.4	-	186.8	-
Outer islands	4.7	425.2	429.9	-	126.2	126.2	-	556.1	11,481
Total	115.2	430.0	545.2	15.1	238.1	253.2	40.0	838.4	18,861

Source: *Kiribati Infrastructure Sector Review* (PRIF, 2009)

2. With the exception of recent work in Betio financed by the Government of Japan, the Government of Kiribati (GoK) has not invested in major capital works or periodic maintenance of the road network for some 20 years. There is also little, if any, routine maintenance of the road network. Resulting road conditions are generally very poor, leading to transport and access problems for the local population.

3. The GoK is currently implementing the *Kiribati Road Rehabilitation Project* (KRRP) with financing from the World Bank, the Asian Development Bank (ADB) and the Government of Australia through the Pacific Region Infrastructure Facility (PRIF). The KRRP includes civil works activities for the South Tarawa road network including the reconstruction, rehabilitation and sealing of approximately 29 km of main road, about 3 km of pavement on Betio Causeway, around 8 km of secondary and feeder roads, and additional paved roads in Betio town. The KRRP project also includes an institutional reform component, part of which aims to improve the future maintenance of the road network in South Tarawa by developing a domestic road maintenance industry in the form of microenterprises for routine road maintenance.

4. This Inception Report forms the first report of the individual consultant contracted to assist in the development of a routine maintenance system for Kiribati involving microenterprises, the subsequent formation and training of the microenterprises and the monitoring and evaluation of the maintenance implementation during the project period. Apart from this Inception Report, this consultancy includes the following five tasks:

1. **Initial Design** – Based on a first mission to Kiribati, an Initial Design Report will be prepared, describing the different aspects of the proposed maintenance system.
2. **Maintenance Manuals** – The initial design will be discussed and further refined during a second mission, after which a set of Maintenance Manuals will be prepared together with the relevant forms and other documentation.
 - **Procurement Manual** – to assist the MPWU and urban councils in the formation and procurement of maintenance microenterprises.
 - **Inspection Manual** – to assist the MPWU and urban councils in the supervision and inspection of the maintenance by microenterprises.
 - **Technical Manual** – to assist the microenterprises in the technical implementation and planning of maintenance activities.

- **Managerial Manual** – to assist the microenterprises in the management of their businesses.
- 3. **Training** – After finalisation of the Maintenance Manuals and preparation of additional training material, a third mission will be carried out with the objective of training MPWU, the urban councils and the Kiribati Fiduciary Services Unit (KFSU) as well as the microenterprises.
- 4. **Implementation Support** – After the microenterprises have started work, regular monitoring and implementation support will be carried out, including a total of 4 missions at 6 month intervals. After each mission a Mission Report will be prepared.
- 5. **Evaluation** – After approximately one year of microenterprise operation, the findings from the monitoring will be used in the updating of the Maintenance Manuals and the preparation of a an Executive Report with the main findings regarding procurement and implementation.¹

5. This Inception Report first describes the different design aspects that will be examined during the first two missions and that will lead to the corresponding deliverables (Initial Design Report and Maintenance Manuals). This chapter also serves as a first introduction to the different counterparts in Kiribati of the different aspects of a routine road maintenance system involving microenterprises. Based on the contents of this chapter, detailed discussions will be held during the first and second missions, complemented by the collection of data and documentation.

6. The second chapter presents the actual work programme for carrying out the different activities under this consultancy assignment and preparing the required deliverables. It provides the tentative dates for the different missions and sets the deadlines for submission of the different deliverables. The final chapter describes the support required from the Government of Kiribati and other counterparts in the implementation of this consultancy assignment. It describes the different types of support required in order to achieve the goals within the required timeframes and to ensure the quality of the design.

¹ Although this is what is proposed in the Terms of Reference, it may be more suitable to carry this out at a later stage to allow all lessons learned from the monitoring missions to be incorporated in the Maintenance Manuals and the Executive Report.

2. DESIGN ASPECTS

7. This chapter looks at the different aspects regarding the design of the microenterprise maintenance system for Kiribati. The chapter serves as a first introduction of the microenterprise maintenance system to the project counterparts and aims to define the different aspects to be discussed and agreed upon in the process of designing the system. For each design aspect the existing options regarding the aspect concerned are introduced together with relevant experiences from other countries, as well as the questions to be answered to allow adjustment to the Kiribati context. The required information will be largely collected during the first mission, leading to the Initial Design Report. This initial design will subsequently be verified and complemented with additional information collection during the second mission. The aspects covered in this chapter include the following:

1. Maintenance activities
2. Microenterprises
3. Organizational modality
4. Contracting modality
5. Procurement modality
6. Tools and (safety) equipment
7. Materials
8. Training
9. Supervision and inspection
10. Costs and funding
11. Monitoring

2.1 MAINTENANCE ACTIVITIES

8. The first step in designing a suitable approach for routine road maintenance in Kiribati is to determine the activities to be carried out. This is necessary in order to subsequently determine the number of maintenance workers required, the skills they need, the tools and equipment they will have to use, the costs involved, etc. Although roads in Kiribati are subject to similar deterioration processes as other countries, there are also some peculiarities that have to be taken into account, specifically the flatness of the terrain, the large number of causeways, the limited vegetation growth, and the influence of the sea and the weather.

Maintenance activities

9. Routine road maintenance activities can generally be divided into activities aimed at preventing damage to the road and keeping it open, mainly consisting of cleaning and clearing, and activities aimed at repairing minor damage that has occurred to the road to avoid the need for more costly conservation efforts in the future. A preliminary list of activities to be carried out by the microenterprises is presented below based on experiences in other countries (this includes the microenterprise routine maintenance activities that are listed in the Specifications of the International Contractor). During the first mission to Kiribati, this activity list will be further developed based on an investigation of the existing road network and any common maintenance issues identified. The list of activities will also be discussed in detail with local counterparts. A finalised list of activities will be presented in the [Initial Design Report](#) to be prepared after the first mission.

10. The cleaning and clearing is likely to include the following activities.

- [Clearing side drains](#) – Removal of any materials (sand, stones, vegetation, garbage, etc.) from the side drains with the objective of ensuring water flow away from the road.
- [Clearing culverts](#) - Removal of any materials (sand, stones, vegetation, garbage, etc.) from the culverts with the objective of ensuring proper water flow away from the road.
- [Clearing bridges, causeways and other cross drainage structures](#) - Removal of any materials (sand, stones, vegetation, garbage, etc.) from underneath and in the direct vicinity

of bridges, causeways and other cross drainage structures with the objective of ensuring proper water flow away from the road.

- **Clearing obstacles and other materials from the pavement and shoulders** – Removal of any obstacles and materials (sand, stones, vegetation, garbage, etc.) from the road pavement and road shoulders with the objective of ensuring proper drainage and allowing vehicles to pass unobstructed.
- **Cutting vegetation** – Cutting of vegetation within the right of way of the road to ensure proper drainage and facilitate visibility (this is likely to be a less important activity in Kiribati).
- **Care for new vegetation** – Watering and maintenance of trees, shrubs, hedges and other vegetation along the rehabilitated road.

11. The repair of minor damage to the road is likely to include the following activities. The exact nature of these activities will depend in part on the pavement design for the KRRP roads and the materials and equipment commonly used and available locally.

- **Repairing potholes** – Filling of potholes in the road pavement.
- **Repairing cracks** – Sealing of cracks in the road surface.
- **Repairing other pavement damage** – Repairs to other pavement damage such as edge break, rutting, ravelling, etc.
- **Repairing drainage structures** – Repairs of minor damage to side drains, culverts, causeways and other drainage structures.
- **Repairing road protection structures** – Repairs of minor damage to protective structures such as sea walls.

12. In defining the maintenance activities to be responsibility of the microenterprises, it will also be important to clarify those activities that do not fall under the responsibility of the microenterprises. For instance, the micro-tunnelling for future cross road services and ducting mentioned in the Specifications for the International Contractor is not considered to be an activity that is best assigned to the microenterprises under their regular maintenance contract, as it will be difficult to assess the amount of work involved for bidding purposes (this depends on the activities of other agencies), and it will be costly to provide different microenterprises with the required equipment (this does not preclude the involvement of the microenterprises under a separate parallel contract according to need).

Frequency and timing

13. Based on the defined list of activities, a review will be carried out of the expected frequency and timing of each of the activities with the aim of estimating the workload and its distribution over the year. Based on this workload, the labour inputs and the required workforce may be estimated.

Questions to be answered

- What activities will be carried out by the microenterprises?
- What is the expected timing and frequency of the maintenance activities?

2.2 MICROENTERPRISES

14. Once the maintenance activities have been defined, the next step is to determine how to organise the necessary inputs (labour, equipment, materials) to carry out the required maintenance activities. The KRRP project foresees the creation of microenterprises along the lines of the approaches applied in Latin America and replicated in China and Nepal, amongst others. These are generally small units consisting of local people who carry out routine road maintenance using basic tools and equipment. They have been found to be the most efficient and effective approach to routine maintenance in a context where maintenance funding is limited and there is a lack of road maintenance contractors. However, within the microenterprise approach, different options exist according to the context of the country and the type of maintenance activities to be carried out, and the most appropriate approach for Kiribati needs to be identified.

Existing or new

15. A first issue in this regard is whether the project should work with existing businesses active in other sectors (with possibly some experience in the road sector), or whether it should aim to create new microenterprises from scratch. New microenterprises have been created in contexts where there were no contractors available, or where existing contractors were not interested due to the low contract amounts and the high mobilisation costs involved (examples are the rural road networks in Peru, Bolivia and Paraguay). In contexts where contractors already exist in other sectors (building contractors, for instance) and where paved roads are involved with larger contract amounts, existing contractors may be transformed into road contractors (an example is Tonga). In other cases where contractors are not present, but other businesses do exist, these businesses may be assisted to transform into road maintenance microenterprises (examples are Solomon Islands, Vanuatu). In some cases the introduction of microenterprises went together with a move away from force account operations towards contracting out, and former government staff was assisted to form microenterprises (examples are the national road networks in Peru and Uruguay, and to a certain degree Tonga and Samoa). The benefits of working with existing businesses, contractors or government staff is that they often already have certain skills and therefore require less training. This may involve technical skills and experience (especially regarding repairs to pavement and structures), but may also involve business management skills and experience (e.g. regarding annual reporting and tax payments). They may also already have some of the required tools and equipment or other facilities.

16. The Specifications for the International Contractor mention the creation of 6 microenterprises in different parts of South Tarawa, implying that the microenterprises will be created from scratch. It seems a bit premature to make this decision and it is recommended to first assess the possibility of involving existing businesses. During the first mission, an analysis will therefore be made of the existing capacity in South Tarawa regarding contractors, businesses and skilled personnel in order to determine whether there are any people and businesses with relevant skills and experience that may be interested in working in routine road maintenance. Where this is the case, it is recommended to work with these people as this is likely to result in a higher quality of work, and will increase the chances of success of the approach. If such people do not exist, or not in sufficient numbers, the approach of creating microenterprises from scratch will be pursued. In either case, with the increased volume of work related to routine road maintenance after completion of the road rehabilitation, there will be a need for additional workers.

Number of maintenance workers

17. A second step in the development of the microenterprises is therefore to estimate the number of workers required in order to assess the quantity and size of microenterprises required. This involves the following aspects:

- **Worker productivity** – Worker productivity refers to the number of person-days per year required to maintain one kilometre of road. This will depend on the road characteristics, the climate and topography, and the maintenance activities to be carried out, but will also depend on the working hours and productivity of people in Kiribati. Based on experiences in other countries it is expected that initially between 30 and 50 person-days per kilometre per year will be required, gradually increasing as the pavement becomes older and damage becomes more frequent. However, this will need to be reviewed during the first mission.
- **Length of road to be maintained** – On Tarawa there are reportedly some 96 km of roads (36 km main road including the 4 causeways, 20 km secondary roads and 40 km feeder roads). The KRRP project includes a total project road length of 40.5 km (32.5 km main road and causeway and 8 km urban feeder roads). Apart from the KRRP roads, there is only a limited length of road where the condition is sufficiently good to warrant investments in routine maintenance. However, the exact road sections and the total length to be covered by the microenterprises will need to be agreed upon during the first mission, identifying the specific sections to be maintained.

- **Working days per year** – Although most experiences with road maintenance microenterprises involve people working full-time, experiences in China have shown the benefits of part-time work, especially regarding the participation of women. Many people involved in road maintenance microenterprises also have other responsibilities and income earning activities. This may include economic activities such as farming, livestock, or fishing, but also activities such as taking care of the household and children. In order to allow people to continue these other activities and to facilitate their participation in the road maintenance microenterprises, part-time work has proven to form a good solution. This has the advantage of spreading the income from the maintenance activities over a greater number of people, while also making people less dependent on the income from road maintenance. However, involvement in road maintenance should not be less than half-time in order to ensure that people gain sufficient experience and skills, and to avoid significant increases in the need for tools and equipment. During the first mission an analysis will be made of the need for and interest in part-time work, especially with respect to the participation of women.

18. The Specifications for the International Contractor speak of creating a total of 6 microenterprises with 4 persons in each, giving a total of 24 maintenance workers. However, the total number of maintenance workers will depend on the issues mentioned above and will need to be reviewed during the first mission.

Number and size of the microenterprises

19. The next step in developing the microenterprises will be to determine how the required labour input may best be distributed over different microenterprises. The decision on the number and size of microenterprises will depend on different aspects.

- **Packaging of roads** – To the extent possible, routine maintenance contracts should include one or more complete roads. Where the road is very long, it may be split into different contracts. Where roads are short and close together, they may be included in one contract package. The contract packaging will depend on the road sections to be maintained by the microenterprises.
- **Management burden** – Each contract involves a management burden in terms of supervision, inspection, payments, contract administration, etc. The more contracts, the more work involved. Reducing the number of contracts will therefore reduce the management burden.
- **Responsibility for roads** – The main roads are the responsibility of the Ministry of Public Works and Utilities (MPWU), while the secondary and feeder roads are the responsibility of the urban councils. Contract packages should therefore only include roads with one responsible entity in order to avoid problems related to inspections and payments.
- **Microenterprise capacity** – Where contract sizes are very small, the number of workers required is similarly small. Microenterprises with very few workers tend to be less productive and less efficient (for instance in the use of tools and equipment). Similarly, very large microenterprises with many workers require people with better management skills in order to function well. Also, where contract sizes are large, transport of the workers becomes a problem. Ideally, microenterprises should consist of between 5 and 20 workers (where microenterprises are created from scratch).
- **Territorial affinity** – Communities in Kiribati reportedly have a strong territorial affinity. It is therefore likely that communities will prefer to have their own members take care of the maintenance of the road sections in their areas. Such territorial affinity will be taken into account upon determining the road sections and number/size of the microenterprises.

20. The KRRP Project Appraisal Document mentions a target of developing at least 5 microenterprises, which appears to be a suitable number to ensure competition while at the same time resulting in an interesting average contract size of nearly 10 km for each microenterprise (based on 40km of KRRP roads and some additional existing roads in good condition). However, the PAD also mentions a contract size of 5 km, which seems too small for a microenterprise to be

efficient, effective and sustainable. The Specifications for the International Contractor speak of a total of 6 microenterprises to be formed in Betio, Bairiki, Ambo, Bikenbeu, Bonriki and Buota, with 4 persons in each. It seems a bit premature to make this decision and this will need to be looked at in more detail during the first mission. It is unlikely that the road network can be evenly divided amongst all microenterprises, as it is recommended to split roads into logical sections (e.g. at the start of a causeway, or at a junction). Therefore, the number of persons in each microenterprise will likely vary, depending on road length as well as other issues mentioned in the previous section. This will need to be discussed further during the first mission based on the points mentioned above.

Selection of microenterprise members

21. Once the number of maintenance workers and microenterprises has been determined, the criteria to be used in selecting the microenterprise workers will need to be defined. Where existing businesses and skilled personnel are used as the basis for the microenterprises, these may have their own staff or workers that they wish to employ. An agreement will therefore need to be reached regarding the degree in which all microenterprise workers need to comply with the selection criteria.

22. The use of criteria for selecting the microenterprise workers has two objectives. Firstly it aims to select those candidates with the highest potential, especially regarding experience, with the aim of increasing the productivity and quality of work of the microenterprises. Secondly, it aims to select people from disadvantaged groups with the objective of providing them with employment opportunities in a context where few opportunities exist for them. Selection criteria may be divided into eligibility criteria that all candidates have to comply with, and preferential criteria that give preference to those candidates that comply with them. A scoring system may be applied together with preferential selection criteria to allow the ranking of candidates. Examples of selection criteria are given below. The selection criteria to be used will be defined during the first mission, taking into account the selection criteria used by the International Contractor.

- **Age** – Candidates must be between 18 and 55 years of age
- **Residence** – Candidates must live close to the road to be maintained
- **Poverty** – Candidates must be from poor households (this requires further definition)
- **Gender** – Preference is given to female candidates (sometimes only women are eligible or a minimum percentage of women workers is required)
- **Youth** – Preference is given to unemployed youth (18-25 years of age)
- **Leadership skills** – Preference is given to candidates with leadership experience
- **Business skills** – Preference is given to candidates with business experience
- **Technical skills** – Preference is given to candidates with technical skills (construction, maintenance)

23. Once the selection criteria have been defined, the selection process needs to be carried out. Depending on the type of microenterprise (existing or new), this will be done by the microenterprise owners or by MPWU and the urban councils (with support from local leaders and project staff). Information regarding the number of workers required, the working hours, the duties and the selection criteria needs to be distributed as widely as possible. With relatively high literacy rates in South Tarawa, it is expected that written media such as local newspapers and bulletin boards may be used, possibly complemented with radio advertisements and by local leaders spreading the word. An information meeting may also be organised at a specific date and place in different locations in South Tarawa (this information should also be included in the advertisements). The information provided should also specify how interested candidates may apply, what information they should provide, and what the deadline is for applying. The most appropriate modalities for informing potential candidates and receiving applications will be determined during the first mission and finalised during the second mission.

24. Based on the applications received, a first review will be carried out to see whether the candidates indeed comply with the eligibility criteria, and to which degree they comply with the

preferential criteria. To facilitate this, preferential criteria may be given a certain score, allowing candidates to be ranked. Once an initial ranking and selection has taken place, it is recommended to interview the highest ranked candidates (a slightly higher number of candidates than the number required) in order to verify the information provided and to check their continued interest. The final selected candidates will then be assisted to form their microenterprise(s). The exact procedures for selection of the candidates and for the formation of microenterprises will be determined during the first mission.

Questions to be answered

- How is road maintenance currently being carried out?
- What capacity exists regarding businesses, contractors and skilled personnel in Tarawa?
- Will the microenterprises be based on existing businesses or created from scratch?
- How many workdays will be required per kilometre per year?
- How many kilometres of road (and which roads) will be maintained by the microenterprises?
- How many days a year will the microenterprise workers work (full-time or part-time)?
- What would be a suitable packaging of the roads to be maintained by microenterprises?
- What criteria will be used for selecting the microenterprise workers?
- How will people be informed of the microenterprise employment opportunities?
- How will interested candidates be ranked and selected?

2.3 ORGANIZATIONAL MODALITY

25. A road maintenance microenterprise is basically a group of people working together to carry out road maintenance activities. However, in order to enter into a contract with a road agency, they need to adopt some kind of organizational modality, allowing a representative of the microenterprise to sign the contract on behalf of the microenterprise. Depending on the country, and especially the legislation and procedures regarding procurement and the registration and operation of organizational modalities, different options have been adopted.

Microenterprises versus petty contractors

26. Most microenterprises in Latin America and their replication in Nepal and China involve so-called communally owned microenterprises where all owners are workers and all workers are owners. This means that a group of workers comes together to form a microenterprise, with each of them a partial owner of the microenterprise, and each of them participating in the work to be carried out (although there may be some degree of distribution of responsibilities within the microenterprise). This is different from typical contractor companies which tend to be individually owned with one owner who hires the necessary workers and who does not generally carry out the actual work himself/herself (he/she generally acts as a manager). This contractor approach also exists for small scale road maintenance, and is then generally referred to as the petty contractor approach.

27. However, the petty contractor approach requires that the petty contractor has a certain skill level in order to manage the business and organise all the labour and other inputs (the responsibility lies with him/her). In the case of the associative microenterprise, the required skills may be distributed over different members as they are responsible together, reducing the individual requirements regarding skill levels. The approach to be adopted in Kiribati will depend on whether or not existing businesses will be used as the basis for the microenterprises, and what management capacities exist. The resulting modality will have an effect on the number of people to be registered as “owners” of the microenterprise. This will be assessed and discussed during the first mission.

Organizational modality

28. In Latin America there is a long history of enterprise development. When the road maintenance microenterprises were introduced in Latin America, there was a desire to create

enterprise modalities (e.g. Limited Liability Company). However, the procedures and costs involved in registering and operating these enterprise forms were not appropriate to the maintenance microenterprises (high costs, many legalised documents, need to travel to the capital for registration, etc.). At the same time, however, procurement legislation required that the microenterprise be registered as a legal entity in order to be able to enter into a contract with the government. As a result, many of the microenterprises in Latin America ended up using the legal organizational modality of an Association (although there are also examples of Limited Liability Companies, Cooperatives, etc.). Although this was not the ideal modality for the maintenance microenterprises, it was found to be the best option at the time. Since then, the registration and operation of many organizational modalities has been simplified in Latin America, resulting in some microenterprises changing their organizational modality.

29. In Nepal and China there is less of an enterprise development history, and the registration and operation of businesses is more complicated and costly, especially outside of major cities. In Nepal it was therefore initially decided to register the microenterprises as Road User Committees, a modality that was allowed to receive funds from local government under the Local Self Governance Act. This modality was not intended for maintenance implementation, however, and currently it is being investigated whether the microenterprises may be registered directly by the district governments. Such a registration by the local government is also applied in China, where the microenterprises are referred to as maintenance groups, and members are registered in a simple document listing the members, which is signed by the County Transport Bureau.

30. In the case of Kiribati, the *Procurement Act* (2002) does not appear to include any requirements regarding the types of modalities that may enter into contracts with the government, although it does mention that suppliers and contractors must have the legal capacity to enter into the procurement contract (Article 6.1.ii). The implications of this clause will need to be confirmed during the first mission.

31. In Kiribati there are different legal organizational modalities that are regulated by different Acts and other legislation. So far, only copies of the *Company Ordinance* (1998) and the *Cooperative Societies Ordinance* (1998) have been obtained, which regulate respectively Limited Liability Companies (public or private) and Cooperatives. Limited Liability Companies are required for any business consisting of more than 20 people, while Cooperatives require a minimum of 10 members. Neither modality seems to be very appropriate based on the initial review of these Acts, but this will be discussed in more detail with the Ministry of Commerce, Industry and Cooperatives (MCIC). Other modalities will be identified and investigated during the first mission. The MCIC has already indicated that the modality of Incorporated Society, a non-profit organization administered by the Ministry of Internal and Social Affairs and regulated by the *Incorporated Societies Act* (2002)², may be a suitable option.

32. This investigation will seek to gain information and advice from the MCIC and its Business Advisory Center (BAC) and Cooperation Promotion Division (CPD). Together with the MCIC, the most suitable organizational modality will be identified for use in creating new microenterprises (existing businesses will likely continue using their existing organisational modality).

Procedures for registration and operation

33. Once the most suitable organizational modality has been identified, the relevant procedures for registering and operating the modality will need to be examined in detail. This includes issues such as the documentation and funds required for registration, paying income tax, social security and other costs related to employees, paying profit tax, requirements for annual or quarterly reporting, requirements for auditing, etc.

34. For the selected organizational modality, the operational procedures will be identified and analysed, in order that they may be described in detail in the *Managerial Manual* for microenterprises. This will allow the microenterprises to ensure compliance with all existing

² A copy of this Act has not yet been obtained.

regulations. This will be initiated during the first mission, and completed during the second mission once the organizational modality to be used has been agreed upon.

Questions to be answered

- Will the microenterprises be individually owned or communally owned?
- What organizational modality is most appropriate for use by road maintenance microenterprises?
- What procedures exist for the registration and operation of the selected organizational modality?

2.4 CONTRACTING MODALITY

35. The KRRP project foresees the introduction of performance-based contracting for routine road maintenance. Traditionally civil works contracts are either input-based when they are carried out on a force-account basis or by people hired on a daily basis (payment is according to inputs such as workdays, materials used, hours of equipment operation, etc.), or volume-based using bills of quantities (payment is according to the volume of work completed, generally on the basis of unit rates defined in the bill of quantities). Although these approaches may work well for (re-)construction contracts of short duration, in the case of routine maintenance contracts that have a long duration and a relatively small contract amount, they are less suitable. In part this is due to the fact that the management burden is quite high, especially in input-based contracts where attendance and productivity have to be continuously monitored. Even in the case of volume-based contracts, workplans need to be prepared and completed work needs to be measured. A second issue is that input- and volume-based contracts create a perverse incentive in the case of maintenance, as contractors can earn more money if the damage, and thus the volume of work and related amount of inputs, is greater. There is a tendency for contractors to allow damage to increase in size in order to increase the costs and their overall profit, leading to higher costs and poorer road conditions.

Performance-based contracting

36. Performance-based road maintenance contracts refer to contracts where the payment is on the basis of the resulting road condition, regardless of the amount of inputs used or the volume of work carried out. A required road condition is determined using performance standards, which define allowable defects for different road elements (e.g. number of potholes per kilometre, degree of blockage of a culvert). If the required road condition is achieved (i.e. all performance standards are complied with), an agreed lumpsum is paid. If the required road condition is not achieved (i.e. some or all performance standards are not complied with), a penalty is applied (generally in the form of a deduction to the payment, often depending on the nature and degree of non-compliance with the performance standards). This has the advantage that the management burden is greatly reduced, as no workplan is required (the contractor is responsible for planning and organising activities) and inspections simply compare the resulting road condition to the performance standards. As payments are fixed and penalties are applied in case of non-compliance, the approach creates an incentive for contractors to address defects in a timely fashion in order to avoid penalties and to increase their profit by reducing the costs involved (patching a pothole when it is still small costs less than waiting and patching it after it has become a large pothole). Lastly, there are advantages in terms of facilitating budgeting, as the fixed payments make it easier to determine the required funding to achieve a certain road condition target.

37. The results have been very positive, with many countries transitioning to performance-based contracts for road maintenance. This has allowed costs to be reduced (by as much as 40% in some countries), both in terms of management costs, but also in terms of implementation costs of the contractors and their related bid prices (as they are able to increase their profits by using more efficient methods and by addressing damage in a more timely fashion, rather than only by carrying out more work or charging higher prices).

38. In the case of microenterprises, most experiences have involved performance-based contracts as this was found to be the easiest to manage, both by the road agency and by the microenterprises³. Problems have only been encountered in roads that were in poor condition and where the microenterprises were not able to achieve the performance standards (at least not during the first months). In Peru the World Bank project therefore introduced the microenterprises only after the rehabilitation of the road, while in China volume based contracts were recommended for roads that were in poor condition.

39. In the case of Kiribati, where a large part of the road network on South Tarawa will be rehabilitated under the KRRP project, it is expected that performance-based contracts can be introduced without problems, at least in the project roads. It may be possible to also include some other roads that are in good condition, but for most of the non-KRRP roads that are in poor condition, performance-based contracting will not be a suitable option (unless complemented by modalities for financing the necessary repairs). The exact roads to be included in the performance-based microenterprise approach on South Tarawa will be determined during the first mission. Replication of the approach to other islands such as Kiritimati will need to look closely at existing road conditions.

40. The Kiribati *Procurement Act* (2002) does not include any obstacles to applying performance-based contracts. However, this will need to be confirmed with the Ministry of Public Works and Utilities and with the Ministry of Finance and Economic Development (MFED) during the first mission.

41. Under performance-based contracts, it is important that one single entity be responsible for a specific road section to avoid disputes regarding the responsibility for any particular damage or non-compliance with the performance standards. In this sense, the rotation of microenterprises proposed in the Specifications for the International Contractor is not considered very appropriate as this will result in different microenterprises being responsible for the same section of road. In addition, under the performance based contracting the microenterprises are free to decide what to do, when to do it and how to do it, as long as they comply with the performance standards and any relevant technical specifications. Introducing a rotation system with each microenterprise working one week out of six is in contradiction with this concept. Although this rotation approach may be used at the beginning of the contract as part of the capacity building of the microenterprises before they are contracted to maintain a specific section of road, this would need to be on a volume or input basis.

42. In the case of road sections where works have been completed or where road sections are concerned that are already in good condition and will be maintained by the microenterprises (e.g. roads in Betio and Bairiki), it is recommended to avoid an approach using rotation and to immediately assign the roads to a specific microenterprise applying performance-based contracting.

43. For non-project road sections influenced by project works (e.g. diversions or roads used for haulage of materials) that will not be rehabilitated under the project and where maintenance is only foreseen for the duration of the project, a rotation approach using input- or volume-based contracts may be applied as a means of training the microenterprises and allowing them to gain experience in the run up to completing the rehabilitation works. Similarly, for project road sections handed over to the International Contractor where works have yet to be initiated and where the International Contractor is responsible for maintenance, a rotation approach may also be applied given that the maintenance activities will be terminated once the rehabilitation works are started. However, even though a rotation approach is possible under these circumstances, it is preferable to assign each microenterprise a specific set of road sections rather than rotating the microenterprises as this will achieve the same goals while making it easier to assess the performance of the different microenterprises. In addition it would allow performance-based contracting to already be

³ In China microenterprises were initially contracted on a volume basis, but this resulted in a very high management burden. Upon transition to performance-based contracts the management burden was reduced by 65%.

introduced (at least for those roads in sufficiently good condition). In either case, after completion of the rehabilitation works it is recommended to assign the road section to a particular microenterprise applying performance-based contracts and to avoid rotation of microenterprises.

Performance standards

44. A performance-based contracting approach requires performance standards that define the allowable defects for the different road elements. These performance standards consist of different indicators for the different road elements and related target values regarding allowable defects to be complied with. The performance standards need to be simple, to allow the microenterprises to assess their compliance and also to facilitate the inspection. They also need to be measurable in order to avoid disputes regarding compliance. Examples of performance standards are given below. The performance standards to be used and the target values to be applied will be discussed during the first mission and finalized during the second mission.

- Maximum size of potholes and maximum number per kilometre of road
- Maximum length of unsealed cracks per kilometre of road
- Maximum siltation/blockage of side drains as percentage of cross section or height of drain
- Maximum siltation/blockage of culverts as percentage of cross section or height of culvert
- Maximum length of vegetation within the right-of-way

Penalties

45. In case of the performance standards not being complied with, penalties are applied. These generally take the form of a deduction to the fixed monthly payment, whereby the amount to be deducted depends on the nature and degree of non-compliance (deductions for excessive damage to the pavement or drainage system will be higher than deductions for excessively long vegetation – an excess of 10 potholes will receive a higher deduction than an excess of 1 pothole). Based on the maintenance activities and the performance standards to be applied, as well as the level of the maintenance payments, the type and level of penalties will need to be decided upon. A proposal will be prepared in the [Initial Design Report](#) and discussed during the second mission.

46. The Specifications for the International Contractor mention that the International Contractor will be paid on a lumpsum basis for the routine maintenance during the defect liability period (60% at the start and 40% upon completion). The Specifications go on to mention that a pro-rata adjustment will be made to the lumpsum payment in case the routine maintenance has not been properly undertaken (clause 12.02). The exact nature of this pro-rata adjustment will need to be reviewed to see to which degree this may be aligned with the deductions to the payments to microenterprises in case of non-compliance with the performance standards.

Questions to be answered

- Are there any obstacles to introducing performance-based contracts?
- What performance standards will be applied?
- What targets will be set for the different performance standards?
- What type and level of penalties will be applied in case of non-compliance with the performance standards?

2.5 PROCUREMENT MODALITY

47. In introducing an approach where new microenterprises are to be formed or existing businesses are to enter into road maintenance, it is desirable that each of these (new) enterprises have the opportunity to gain experience in order to develop a strong road maintenance industry. At the same time, it is desirable that the different (new) enterprises compete with each other in order to ensure efficiency and effectiveness. These aspects seem at odds with each other, as competition will necessarily mean that some enterprises will not be able to obtain a contract and gain experience. Assisting in the creation of a microenterprise only to have it fail at obtaining a

contract would be a wasted effort. A balance therefore needs to be sought, using some kind of targeted procurement while at the same time ensuring competitive prices.

48. In Latin America most microenterprises that were formed were initially contracted directly on a single source basis under the procurement legislation of development banks (including World Bank). Only at a later stage when procurement was carried out under national legislation was contract award on the basis of open tendering, with different microenterprises competing with each other (and even with more established contractors). This approach has been very successful, providing the opportunity for the road maintenance industry to develop, and subsequently allowing the strongest microenterprises to flourish. Contract amounts were initially determined by the government, based on productivity rates and including allowances for tools, equipment, etc., and a certain profit margin. Later these were determined based on the bid prices.

Subcontracting by International Contractor

49. In the case of Kiribati, a similar approach is recommended. Initially the microenterprises will be subcontracted by the International Contractor for the duration of the defect liability period. The contracting method will be determined by the International Contractor within the scope of the existing contract clauses. It is recommended to ensure that the subcontracts involve several microenterprises, in order that a sufficiently strong road maintenance industry is developed during the two-year defect liability period. This would allow competitive bidding to take place in the future for road maintenance contracts with either MPWU or the urban councils.

50. The Specifications for the International Contractor stipulate that 6 microenterprises will be established and contracted in Betio, Bairiki, Ambo, Bikenbeu, Bonriki and Buota, implying that each microenterprise would be contracted for the maintenance of the road sections in their area. However, this means that the maintenance contracts would need to be sole-sourced as each area has only one microenterprise. Although this is likely possible under the contract with the International Contractor, this may be difficult to replicate under government competitive bidding after the end of the defect liability period. The targeting of these subcontracts will therefore be an important issue to be discussed with the International Contractor and the government during the first mission.

Competitive bidding by MPWU and urban councils

51. Once the defect liability period has come to an end, the maintenance of the project roads will once again become the responsibility of the Ministry of Public Works and Utilities (main roads) and the urban councils (secondary and feeder roads). They will be responsible for procuring the services of the microenterprises and will be bound by the national procurement legislation.

52. Procurement is the responsibility of the Central Procurement Review Board in case of contract amounts exceeding AUD 50,000, and of the Ministry Procurement Review Committee in case of lower contract amounts. Contracts for routine road maintenance will most likely be less than AUD 50,000 (if several contracts for the road network in South Tarawa are involved), and will therefore only require the involvement of the Ministry Procurement Review Committee. In the case of secondary and feeder roads, procurement will likely be the responsibility of the urban councils or the Ministry of Internal and Social Affairs (this needs to be confirmed).

53. According to the *Procurement Act (2002)*, there are several procurement modalities that can be used (tendering, two-staged tendering, request for proposals, competitive negotiation, restricted tendering, request for quotations, and single-source procurement). However, in general normal tendering is supposed to be used and the other modalities are only to be used in specific cases of urgent need, limited suppliers, readily available services, etc. As such, these other modalities are not very appropriate to routine road maintenance microenterprises and likely normal tendering will have to be applied.

54. In order for tendering to work properly, it is necessary to ensure a sufficiently strong road maintenance industry. Based on experiences in other Pacific island countries and in isolated rural

areas in larger countries where the construction industry tends to be very limited in size, this is a challenge in itself. The number of contract packages in the road sector each year is limited by the small size of the road network to be maintained. Maintenance contracts will likely be on an annual basis, and if a microenterprise is not awarded a contract, it means it will have a year without income from road maintenance.

55. Different approaches have been applied to ensuring the sustainability of a sufficiently large road maintenance industry. According to the study on *Encouraging Private Sector Development in the Road Sector in Pacific Island Countries* (PRIF, 2013), competition for road maintenance contracts in Samoa is restricted to a certain degree, with contractors only allowed to bid for contracts on the island where they are registered and with a maximum number of contract packages that can be awarded to a single contractor in order to allow weaker enterprises to gain experience and become stronger. In Timor-Leste some of the road projects have also defined a maximum number of contracts any bidder may be awarded, in order to ensure that a greater number of contractors has access to contract opportunities and can gain experience. In addition, in many of the Pacific island countries, especially on the smaller islands, road maintenance enterprises tend to be active in different sectors, allowing them to survive a year without income from road maintenance contracts.

56. In the case of Kiribati, the approach to be used will be discussed during the first and second missions. Where microenterprises are to be created from scratch, it will be difficult to ensure that they can earn income from other sectors. With existing businesses that are already active in other sectors, this will be easier to achieve. Limiting the competition, by defining a maximum number of contracts per bidder or allocating contracts according to the location of the enterprise (Betio, Bariki, Bonriki, etc.) is an option that may be applied in Kiribati. This will be discussed in detail during the missions to Kiribati.

57. The creation of six microenterprises as mentioned in the Specifications of the International Contractor will result in a sufficient number of microenterprises to ensure competition. However, the same Specifications foresee these microenterprises being created in different parts of South Tarawa, implying that each would work in their own area. This goes contrary to creating competition and ensuring competitive bidding. Similar experiences in countries such as Armenia and Georgia where former government maintenance stations responsible for a specific area were transformed into companies, has shown that this does not induce competition with the 37 contract packages (one for each area) only receiving 38 bids. A similar situation is likely to occur in Kiribati with each microenterprise only bidding for the contract in its own area. Given the small size of South Tarawa, which facilitates transport to different road sections, it is recommended to promote open competition between the microenterprises from the beginning, while at the same time introducing mechanisms for ensuring a sufficiently sized road maintenance industry.

Bidding documents

58. For contracting the microenterprises after the defect liability period, bidding and contract documents will need to be prepared for use by MPWU and the urban councils. It is further recommended that the same bidding and contract documents be used by the contractor during the defect liability period to allow microenterprises to become familiar with the documents. These bidding and contract documents should be as short and simple as possible to ensure proper understanding, while containing all the necessary clauses to avoid disputes and to minimise risks (for both parties).

59. These bidding documents will take into account the different aspects to be discussed during the first two missions (e.g. contracting modality, contract packaging, etc.), and standard bidding documents will be prepared after the second mission as part of the [Procurement Manual](#).

Questions to be answered

- How will the microenterprises be selected and contracted during the defect liability period?
- What procurement modality will be applied after the defect liability period?

- How can sustainable competition in the road maintenance sector be ensured in Kiribati?
- What needs to be included in the bidding and contract documents?

2.6 TOOLS AND EQUIPMENT

60. Apart from the labour inputs, the microenterprises will need tools and (safety) equipment in order to carry out the routine maintenance. The exact needs of the microenterprises will be determined during the first and second missions, based on the activities to be carried out. During these missions, the manner of providing the tools and (safety) equipment will also be further explored.

Hand tools

61. Most routine maintenance activities only require simple hand tools. An example of common hand tools for routine road maintenance is given below (these include tools for microenterprises listed in the Specifications for the International Contractor). The exact quantities required will depend on the type and size of the microenterprises and the maintenance activities to be carried out. The types and quantities of hand tools required will be determined during the first and second missions.

- **Pickaxe** – to loosen hard or stony material
- **Hoe** – to loosen or excavate soft material
- **Shovel** – to excavate and throw soft or loosened material
- **Rake** – to spread out loose material or collect together material that is spread out
- **Broom** – to sweep materials from the road pavement (and shoulder)
- **Machete** – to cut vegetation
- **Earth rammer** – to compact earth or asphalt in a small area
- **Watering can** – to spread water before soil compaction
- **Basket** – to transport material over a short distance
- **Wheelbarrow** – to transport material over a medium distance
- **Bitumen distribution can** – to spread bitumen along cracks or potholes
- **Crack squeegee** – to channel bitumen towards cracks
- **Lifting iron** – to lift covers for U-drains

Maintenance equipment

62. Because the KRRP project also involves pavement repairs, certain light equipment will also be needed to ensure the quality of the work (especially compaction) and reduce the costs involved (especially transport of materials and people). The following are examples of light equipment commonly used in road maintenance (by microenterprises). The types and quantities of equipment required will be determined during the first and second missions. This will also look at ownership of the different types of equipment.

- **Plate vibrator** – to compact new pavement material in a small area
- **Pedestrian roller** – to compact new pavement material in a medium area
- **Asphalt saw** – to square out a pothole
- **Pickup or small truck** – to transport people, tools and materials
- **Large truck** – to transport materials (generally not owned by microenterprise)
- **Asphalt plant** – to prepare material for patching (generally not owned by microenterprise)

63. The Specifications for the International Contractor also mention mulching equipment and micro-tunnelling equipment (for future cross-road services and ducting). The need for this specific equipment and whether this needs to be provided to the microenterprises, will need to be discussed during the first mission. The Terms of Reference for the Design and Supervision Consultant further stipulate that the Consultant is responsible for preparing the specifications for the equipment to be provided to the microenterprises by the International Contractor.

Safety equipment

64. With people working on the road, safety is always a concern. Microenterprises will require safety equipment to reduce the risk of work related accidents, as well as a first-aid kit to treat minor injuries and accident insurance in case of more serious injuries. The following are examples of safety equipment commonly used by road maintenance microenterprises.

- **Safety vests** – to increase visibility of maintenance workers
- **Safety cones** – to warn drivers that people are working on the road
- **Warning signs** – to adequately warn drivers of ongoing maintenance or dangerous situations
- **First-aid kits** – to treat minor injuries and avoid infection
- **Accident insurance** – to cover the costs of treatment of more serious injuries

65. Other safety equipment such as steel toe boots, safety glasses, long sleeve shirts, long pants and gloves may also be considered due to the fact that the maintenance responsibilities will include working with (hot) bitumen and asphalt. The types and quantities of safety equipment required will be determined during the first and second missions. The possibility of providing First Aid training to the microenterprise members through the Kiribati Red Cross will also be assessed.

Obtaining the tools and (safety) equipment

66. Once the list of tools and (safety) equipment has been finalised, the next step is to determine how these will be provided to the microenterprises. There are basically two main methods used in this sense. Either the items are procured by the road agency and provided free of charge to the microenterprises (the maintenance payments are reduced to reflect the reduced costs for the microenterprises), or the microenterprises are required to purchase the required items themselves (the maintenance payments are increased to reflect the additional costs). Variations exist where the items are provided to the microenterprises by the road agency but gradually discounted from their payments, or advances are provided to cover the costs of purchase of the items by the microenterprises. Items that are very costly and are not used on a daily basis by a microenterprise, are best hired out or loaned out to the microenterprises by either the road agency or the private sector. The choice of the method to be used depends on a couple of factors:

- **Availability of the required items** – where specific items are difficult to obtain locally, their procurement by the microenterprises may form a problem, causing delays in the start of work or increasing costs. Where quality of the items is an issue, a similar problem may occur. In such cases it is preferable that items are procured by the road agency. This will also allow items to be purchased in bulk, reducing costs.
- **Access to credit** – Where access to credit is low or costly, it will be difficult for microenterprises to purchase the required items at the start of the contract. In such cases an advance is necessary, or the items need to be provided by the road agency.
- **Care of tools and equipment** – Where tools and equipment are provided free of charge, microenterprises may not take proper care of them. It also complicates what will happen at the end of the contract, whether the tools and equipment will be returned to the road agency or remain the property of the microenterprise, and what happens regarding the provision of tools and equipment for subsequent contracts.
- **Efficient use of equipment** – In the case of costly equipment such as large trucks and asphalt plant which are only cost effective if used on a large scale and a daily basis, ownership by individual microenterprises will not be very efficient or sustainable. Hiring from the private sector will also not be a realistic option in Kiribati. In the case of Kiribati, provision of such equipment by the road agency or other government agency may be the only option. This would most likely involve both the use of the equipment and its operation by qualified government staff. A review of the equipment and plant owned by MPWU and the private sector will be carried out to determine to which degree certain equipment may be provided by them.

67. The Specifications for the International Contractor stipulate that the International Contractor will supply the microenterprises with the required tools and equipment. However, the Specifications do not provide any detail on how this should be done and this needs to be discussed and agreed during the first mission.

Questions to be answered

- What types and quantities of tools and (safety) equipment are required by the microenterprises?
- How will the tools and (safety) equipment be provided to the microenterprises?
- What equipment is available for rent or loan in South Tarawa?

2.7 MATERIALS

68. For the repairs to the road and its structures, materials will be required. The type of materials required will depend on the road design to be applied under KRRP, but also on the materials commonly available locally.

Types of materials

69. A list of common materials is listed below. The exact types and quantities of materials required will be determined during the first and second missions.

- **Gravel** – to repair the road shoulder
- **Crushed stone** – to carry out repairs to the road pavement (potholes) and structures
- **Bitumen** – to carry out repairs to the road pavement (potholes, cracks)
- **Asphalt concrete / Hot mix / Cold mix** – to carry out repairs to the road pavement (potholes)
- **Stones** – to carry out repairs to drainage and road protection structures
- **Cement and sand** – to carry out repairs to structures

Obtaining the materials

70. As with the tools and (safety) equipment, there are basically the same two options for providing materials to the microenterprises: they are either procured directly by the microenterprises or provided by the road agency (either directly or through a larger contractor).

71. Except for materials that are readily available locally, obtaining materials is a problem for most microenterprises as it requires access to good quality materials and transport of the materials to the road. Especially where materials need specialised treatment before application, such as the heating and mixing of asphalt concrete, this can be complicated for microenterprises to achieve, in addition to being more costly due to the equipment requirements and the low volumes required by each microenterprise. In such cases the treatment may be more efficiently and effectively carried out by the road agency (or a larger contractor), and the material subsequently provided to each microenterprise (either free of charge or against payment).

72. An additional issue is that materials form a large part of the maintenance costs in case of paved roads, and properly estimating the material requirements can be complicated. Errors in such estimations can lead to large losses for contractors in the case of performance-based contracts. Especially for microenterprises with little capital and a lack of experience, the risks involved may be too large. Where performance-based maintenance is recently being introduced and the contractors involved have little experience in road maintenance, it may be preferable that the materials be provided free of charge, at least during the first few years (with a corresponding reduction in the contract amount).

73. This is also what is seen in most experiences with microenterprises in other countries. Either suitable sources of materials close to the road are identified, or stocks of materials are provided to the microenterprises (e.g. gravel heaps at specific intervals along the road). In the case of pothole patching, patching material is generally provided at specific moments in time for the

microenterprises to use. To facilitate the bidding process for the microenterprises, the materials are generally provided free of charge and the microenterprises therefore do not include this cost in their bid.

Questions to be answered

- What materials will be required by the microenterprises (including approximate volumes)?
- How will the different materials be provided to the microenterprises?

2.8 TRAINING

74. The microenterprises to be formed under the KRRP project will need to be trained, whether these are new microenterprises formed from scratch or existing businesses transferring into the road maintenance sector. In addition, the MPWU and urban councils as well as the Kiribati Fiduciary Services Unit (KFSU) will need to receive training in the development of maintenance microenterprises and the management of road maintenance contracts.

Training of MPWU and urban councils

75. The training of MPWU, the urban councils and the KFSU will focus on a proper understanding of the need for (routine) road maintenance and the steps to be undertaken in developing and contracting microenterprises. A training will therefore be carried out as part of this consultancy to explain the role of (routine) maintenance in the life of a road, the activities involved and how these may be carried out by microenterprises. The training will also look at the specific process of supporting the creation of road maintenance microenterprises and their subsequent procurement, from tendering to contract award. Lastly, it will specifically look at contract management, supervision, inspection and payment. The training will be carried out during the third mission.

76. To assist in the training and as support material in the future, a [Procurement Manual](#) and an [Inspection Manual](#) will be prepared. These will describe in detail all the steps to be undertaken, and will provide the necessary forms and documents. These two Maintenance Manuals will be prepared after the second mission and will form the basis for the training of MPWU, the urban councils and KFSU.

Technical training of microenterprises

77. The technical training will focus on the implementation of the different maintenance activities, their planning and organisation, and the technical specifications involved. The KRRP project foresees that this training will largely be carried out by the International Contractor before and during the defect liability period. The Design and Supervision Consultant is further responsible for designing and specifying the training programs to be provided by the International Contractor. Discussions will be held with the Design and Supervision Consultant and the International Contractor to determine the content and timing of the training in order to ensure that it responds both to the needs during the defect liability period as well as maintenance needs in future years.

78. Once the content of the technical training has been agreed upon, a [Technical Manual](#) will be prepared describing in detail the different maintenance activities and how these should be carried out, the use of tools, equipment and materials, and the planning and organisation of maintenance activities throughout the year. This [Technical Manual](#) will be prepared after the second mission and will form the basis for the technical training.

Managerial training of microenterprises

79. The managerial training will focus on improving the business management of the microenterprises in order to improve their sustainability as viable businesses. This will look at procedures for registering and operating a business (based on the selected organizational modality), but also aspects such as team building, conflict resolution, etc. This training will also

deal with all the reporting requirements regarding routine road maintenance, the request for payments, and other management issues related to the routine maintenance contracts. This training will be largely carried out as part of this consultancy, with support from the Ministry of Commerce, Industry and Cooperatives (MCIC). In the Terms of Reference of the Design and Supervision Consultant, it is not fully clear if they are also responsible for designing and specifying the contents of the managerial training. Similarly, in the Specifications for the International Contractor it is not clear whether the International Contractor is also responsible for the managerial training (clause 1230 speaks of “training” in general). The involvement of the Design and Supervision Consultant and the International Contractor in the design and execution of the managerial training will need to be clarified during the first mission. The training will be carried out during the third mission.

80. Once the content of the managerial training has been agreed upon, a [Managerial Manual](#) will be prepared explaining the different aspects related to business and contract management with respect to the road maintenance microenterprises. This [Managerial Manual](#) will be prepared after the second mission and will form the basis for the managerial training.

Questions to be answered

- What should be the content of the training of MPWU, the urban councils and KFSU?
- What should be the content of the technical training for microenterprises?
- What should be the content of the managerial training for microenterprises?
- Who will develop and carry out the different training activities?

2.9 SUPERVISION AND INSPECTION

81. The microenterprises will require regular supervision at the start of their contract, to assist them in doing their work properly. The work of the microenterprises will also need to be inspected on a regular basis, to ensure compliance with the performance standards and to determine the amount to be paid to them.

Supervision

82. Regular supervision is mainly required during the first 6-12 months. As this falls within the Defect Liability Period, it will largely be the responsibility of the International Contractor to carry out the supervision. The Design and Supervision Consultant is also required under its Terms of Reference to assess the performance of the microenterprises on an annual basis during the defect liability period. However, the MPWU and urban councils will also need to be involved to a certain degree, in order that they may replicate the supervision activities if additional microenterprises need to be created in the future (for the remaining road network or on other islands). The supervision serves to correct and avoid any mistakes made by the microenterprises, but especially to further build up the capacities of the microenterprises.

83. Initially the focus will be on properly carrying out the different maintenance activities, and planning and organising the activities each month. However, part of this supervision will also look at the managerial aspects of the microenterprises, assisting them in making the tax payments and carrying out the necessary reporting and audits. This will not be a strong point of the International Contractor who is unfamiliar with Kiribati regulations, and it is recommended that this be carried out with the support of the Ministry of Commerce, Industry and Cooperatives (MCIC). The exact supervision requirements and the responsible parties will be determined during the first and second missions.

Inspection

84. The work of the microenterprises needs to be inspected on a regular basis to ensure compliance with the performance standards. During the defect liability period the maintenance will formally be the responsibility of the International Contractor, who subcontracts it to the microenterprises (the exact nature of the maintenance contracts during the defect liability period

will need to be reviewed by examining the relevant clauses in the contract of the International Contractor). After the defect liability period the maintenance contract will be signed directly between the microenterprises and MPWU or the urban councils. However, it is recommended that the same approach be used to inspect the work of the International Contractor (subcontracted to the microenterprises) as is used to inspect the work of the microenterprises directly.

85. The inspection basically involves an examination of the road under contract, comparing the condition of the different road elements to the performance standards. Generally this involves a drive over, stopping only where it is expected that the performance standards are not complied with. At these locations measurements are taken to check compliance. This makes the inspection process relatively easy. The inspection is generally carried out on a monthly basis (the inspection period may be extended at a later stage once some experience has been gained by both the employer and the microenterprises). On the basis of the results of the inspection, an Inspection Report is filled in, indicating any non-compliance with the performance standards. The exact nature of the inspections will be defined during the first and second missions. A template for the Inspection Report will be prepared after the second mission as part of the [Inspection Manual](#).

Payments

86. Under performance-based contracts, payments generally consist of fixed monthly lumpsums. In case the inspection identifies any non-compliance with the performance standards, penalties are applied in the form of deductions to these monthly payments. The level of the monthly payments will be determined through the bidding process, although an estimate of the average monthly payment per kilometre will be prepared after the first mission.

87. The deductions often take the form of a percentage of the monthly payment, whereby the percentage depends on the specific performance standard that is not complied with (the percentage is higher in case of pavement damage than in case of tall vegetation, for instance). Values for the deduction percentages will be proposed after the first mission and finalised during the second mission.

88. In order to also allow the degree of non-compliance to be reflected in the deduction to the payment, the deductions are often applied for each kilometre section of road, whereby the monthly payment is spread over the number of kilometre sections under the contract. If several kilometre sections have the same defect, the deduction percentage is applied to the same number of kilometre payments. The appropriateness of this approach will be discussed during the first mission.

Bank account

89. Based on the agreed monthly payments and the calculated deductions for a specific month, the payment for that month can be determined. This payment is then transferred to the microenterprise. This is best done through bank transfers as this ensures transparency regarding payments made and incomes of the microenterprises. The microenterprises will therefore need to open a bank account, preferably with a bank with a presence in Kiribati. This will be further investigated during the first mission, together with the expected period for processing the payment (this should be kept as short as possible).

Questions to be answered

- How will the supervision of the microenterprises be carried out (during the defect liability period and afterwards)?
- How will the inspection of the microenterprises be carried out (during the defect liability period and afterwards)?
- How will deductions be applied to the monthly payments in case of non-compliance with the performance standards?
- What requirements exist for opening a bank account in the name of a microenterprise?
- How much time is required to process the payments to the microenterprises?

2.10 COSTS AND FUNDING

90. As in all maintenance systems, the main issue to be faced in developing a successful and sustainable system of routine road maintenance microenterprises is that of the costs involved and the available funding to cover the costs.

Costs

91. According to the *Kiribati Infrastructure Sector Review* (PRIF, 2009), the cost for maintaining the main roads are estimated to be AUD 80,000/year, and for the secondary roads AUD 30,000/year. With 36 km of main roads and 20 km of secondary roads, this comes down to AUD 2,250/km/year for main roads and AUD 1,500/km/year for secondary roads. The costs for the maintenance microenterprises will need to be confirmed during the first and second mission, but are expected to be in this order of magnitude (it is impossible to give an accurate estimate based on the information currently available). The average cost per kilometre will depend on the specific cost factors that make up the total cost:

- **Wages** – The minimum wage level in Kiribati or alternatively the local market rate for labour will need to be determined. Based on the estimated average number of workdays needed per kilometre per year, the wage costs will be translated into an average cost per kilometre per year.
- **Tools & equipment** – The costs of the required types and quantities of tools and (safety) equipment will need to be determined and translated into an average cost per kilometre
- **Materials** – Based on an estimation of the required volumes of materials needed and the unit costs of those materials, the total material costs per kilometre per year will be determined and subsequently translated into average costs per kilometre per year⁴.
- **Income tax** – The income tax requirements for Kiribati will need to be determined, and the amount of income tax will be determined based on the wage rates, and subsequently translated into an average cost per kilometre.
- **Accident insurance** – A suitable modality for insuring against accidents will be identified. The costs will be translated into an average cost per kilometre.
- **Allowances** – Any allowances or costs involved in transport or other issues related to road maintenance will need to be determined, and translated into average costs per kilometre per year.
- **Profit** – An average profit margin of 10%-15% will be used to determine the related costs and translate these into average costs per kilometre per year.
- **Profit tax** – The profit tax requirements for Kiribati will need to be determined, and the amount of profit tax will be determined based on the expected contract amounts, and subsequently translated into an average cost per kilometre per year.
- **Other operational costs** – Any other operational costs will need to be determined and translated into average costs per kilometre per year.

92. In determining the wage levels, income tax, profit tax and other cost aspects, a review of relevant legislation will be carried out before and after the first mission, in addition to which support will be sought from the Business Advisory Center (BAC) of the Ministry of Commerce, Industry and Cooperatives (MCIC) and the private sector in Kiribati.

Funding

93. Maintenance funding is a very important aspect of the sustainability of the system to be developed, as it defines to what degree the maintenance costs can be covered and whether this can be done on a sustainable basis. If the expected funding levels do not cover the foreseen costs, ways need to be found of increasing the funding, or alternatively the design of the road

⁴ In the course of the design of the microenterprise approach, it may be decided that the material costs will not form part of the contract with the microenterprises and will be provided by the MPWU or urban councils. However, these costs will still need to be covered by the maintenance budget.

maintenance microenterprise system needs to be adjusted in order to reduce the costs (e.g. by reducing the types of activities, adjusting the performance standards, adjusting the road length to be maintained, etc.).

94. According to the *Kiribati Infrastructure Sector Review* (PRIF, 2009), AUD 755,000 from the government and urban councils was spent in 2007 on operation and maintenance together with AUD 6,000 from development assistance. An additional AUD 2.27 million from development assistance was spent on capital investments. Although this would appear to be sufficient to cover the estimated costs as mentioned above, it is not clear from this data how the expenditure on operation and maintenance is used and how much goes to maintenance. According to the *KRRP Project Appraisal Document* (2011), the maintenance budget for the entire country averaged AUD 260,000 in the years 2007, 2008 and 2010. Assuming that approximately half this budget would be available for South Tarawa, this would still allow a decent coverage of the estimated costs. Further revenue is available from the Betio Causeway toll which raises an average of AUD 300,000 per year, only half of which is used for maintaining the causeway itself (the Causeway Fund reportedly holds approximately AUD 2.5 million of accumulated revenues).

95. Funding from the urban councils for secondary and feeder roads is much more limited. Although vehicle registration and driver's licence fees are collected by the two urban councils, this revenue flows into the consolidated revenue account.

96. Under the KRRP project it was agreed that budget allocations to the maintenance of main and secondary roads would increase to USD 1,500/km/year for sealed roads and USD 500/km/year for unsealed roads by 2013 (with subsequent annual inflation corrections), implying that maintenance levels were previously (much) lower. The *Kiribati Infrastructure Sector Review* (PRIF, 2009) indicates that the length of sealed and unsealed roads is as listed in the table below. Based on these lengths, the required budget allocations for the maintenance of main and secondary roads would total just under USD 70,000 (AUD 73,500). These costs are significantly lower than the estimated costs mentioned above.

Table 2 Road lengths in South Tarawa (km)

	Main roads	Secondary roads	Total
Sealed	31.1	10.5	41.6
Unsealed	4.8	9.1	13.9
Total	35.9	19.6	55.5

Source: *Kiribati Infrastructure Sector Review* (PRIF, 2009)

97. The 2013 National Budget for Kiribati shows an expected revenue of AUD 74.8 million and a further AUD 24.3 million in financing, giving an expected expenditure ceiling of AUD 99.1 million. The 2013 budget from the consolidated fund for the Ministry of Public Works and Utilities is AUD 2.3 million, most of which is spent on salaries and other personnel costs (AUD 1.8 million) with hiring of plant and equipment forming only a small portion of the budget (AUD 0.15 million). In addition MPWU is to receive AUD 16.7 million from the development fund, although the budget is not clear on the source and objective of these funds (except for government funds). The total budget for MPWU thus comes to AUD 19.0 million. Apart from a government allocation to support South Tarawa road upgrading, no mention is made of any allocation of funds to road maintenance or the road sector in general. Actual and expected funding levels will be further investigated during the first and second missions and discussed with both MPWU and MFED. This will also look at funding levels available from urban councils for maintenance of feeder roads.

Questions to be answered

- What is an appropriate wage rate for maintenance workers (daily, monthly)?
- What is the expected average cost of labour inputs per kilometre of road?
- What are the costs for the different tools and (safety) equipment required?
- What is the expected average cost for materials per kilometre?
- What taxes and other operational costs need to be paid by the microenterprises?
- How much funding is available for road maintenance (main, secondary, feeder roads)?

- How is road maintenance funding expected to change over the next 5 years?

2.11 MONITORING

98. As with the introduction of any new system, proper monitoring is required to assess whether the system is functioning properly. The monitoring of the road maintenance microenterprises will mainly use the data from the Inspection Reports regarding the road conditions, the payments made and any penalties applied. The microenterprises will also be required to prepare a Monthly Report regarding the number of person-days worked and the (approximate) volumes of work completed (at least for certain activities such as pavement repairs). This Monthly Report will not affect the payments to be made, but will allow the comparison of the contract amount to the actual implementation costs in order to identify any issues regarding excessively high or low payments. Such monitoring will allow the cost estimates to be improved over time, and will also serve as a basis for further training of the microenterprises regarding bidding and work planning.

Monitoring forms

99. For the monitoring use will be made of the Inspection Report for collecting the necessary data regarding road condition and payments (no additional data will be required that is not already required for the inspection itself). In addition, microenterprises will be required to submit a Monthly Report. A simple format for the Monthly Report will be developed after the first or second mission, focusing on data regarding inputs used (especially person-days and materials) and volumes of work carried out (for certain activities). The Specifications for the International Contractor state the responsibility of the International Contractor for providing this information as part of the monthly reporting. Lastly, a simple Excel sheet will be prepared for entering the main data from these two sources on a monthly basis. This Excel sheet will allow for monitoring over time (to see possible seasonal effects on workload and road condition) and comparison between different microenterprises and their respective roads. The Excel sheet will be prepared after the second mission. During the defect liability period, the International Contractor will be responsible for filling in the Excel sheet and sending it to the consultant on a regular basis in order that he may monitor performance and identify any issues at an early stage (it is recommended to make this part of the monthly reporting responsibilities of the International Contractor).

Monitoring missions

100. Under this assignment a total of four monitoring missions are planned. These will be carried out at 6-month intervals from the start of the microenterprise activities. During these missions the consultant will review the performance of the microenterprises over the past half year and discuss any issues that have arisen. Discussions will be held with MPWU and the urban councils, with the microenterprises, with the International Contractor and with any other relevant counterparts. Based on these discussions, changes may be introduced to the system to resolve any issues identified.

Updating Maintenance Manuals and summarising findings

101. Any changes introduced will also be reflected in updated versions of the Maintenance Manuals. This will be carried out after the second monitoring mission, assuming that most issues will have been identified by then. A new set of updated Maintenance Manuals will subsequently be provided to MPWU. An [Executive Report](#) summarising the main findings and conclusions will also be prepared after the second monitoring mission⁵. Apart from reviewing the microenterprise maintenance system as introduced in Kiribati, it will also look at possible replication on other islands (especially Kiritimati).

⁵ Although the Terms of Reference stipulate that this be carried out after the second monitoring mission, it may be preferable to delay this till the end of the assignment to ensure that all lessons learned are incorporated in the Maintenance Manuals and Executive Report.

3. WORK PROGRAMME

102. This assignment consists of 5 tasks as listed below. This chapter details the activities to be carried out under each task and the proposed timing. A complete work programme can be found in [Annex 1](#).

- [Task 1](#) – Initial Design (including mission 1)
- [Task 2](#) – Maintenance Manuals (including mission 2)
- [Task 3](#) – Training (including mission 3)
- [Task 4](#) – Implementation Support (including missions 4, 5, 6, and 7)
- [Task 5](#) – Evaluation

3.1 INITIAL DESIGN

103. This first task of the assignment serves to develop an initial design describing the different aspects of the microenterprise maintenance system to be applied. This subsequently serves as a basis for discussions for finalising the design under the next task. This task of the assignment consists of three separate activities:

- [Preparation](#) – Before the first mission, a review will be carried out of available documentation in order to obtain a head start in the analysis of the different design aspects. A presentation will also be prepared regarding routine road maintenance by microenterprises and experiences in other countries, which will be presented to the different counterparts during the first mission.
- [Mission 1](#) – A first two-week mission will be carried out to present the microenterprise maintenance approach and discuss the different design aspects with local counterparts, review the road network, and collect the required information and documentation.
- [Initial Design Report](#) – After completion of the first mission, the Initial Design Report will be prepared, proposing the design to be used in Kiribati with respect to the different design aspects mentioned in this Inception Report. This will be sent to the counterparts for review.

Mission 1

104. The first mission will last two weeks and forms the most important portion of this task of the assignment, as it will allow information to be gathered and exchanged with local counterparts and agreement to be reached on the different design aspects. During this mission discussions will be held with the counterparts listed below (additional counterparts may be identified at a later stage). The issues to be discussed with these counterparts are indicated in [Annex 2](#). Meetings with these counterparts will be organised before the start of the mission, and additional meetings may be organised as needed.

- Ministry of Public Works and Utilities (MPWU), especially its Civil Engineering Department (CED)
- Teinainano Urban Council (TUC) and Betio Town Council (BTC)
- KRRP Project Management Unit (PMU)
- Ministry of Finance and Economic Development (MFED)
- Ministry of Commerce, Industry and Cooperatives (MCIC), especially its Business Advisory Center (BAC) and Cooperatives Promotion Division CPD)
- The International Contractor for project civil works (IC)
- The Design and Supervision Consultant (DSC)
- Local (contracting) businesses (LB)
- Relevant local organizations (LO)

105. At the start of the mission a short half-day workshop will be organised to present the different design aspects of a microenterprise maintenance system, presenting relevant experiences from other countries (this will also include relevant experiences in other Pacific Island Countries related

to the development of a domestic road maintenance industry). This workshop will involve most of the counterparts listed above.

Timing

106. Based on the fact that the International Contractor has only just started work, it was agreed with the counterparts in Kiribati that the first mission would coincide with the next donor mission (13-20 March 2014). Proposed dates for the first mission are from 6-20 March 2014, allowing some progress to be made before the donor mission, during which the initial findings and conclusions can be further discussed. The Initial Design Report would be prepared immediately afterwards and be provided to the Government of Kiribati by the end of April 2014. A complete work programme is included in [Annex 1](#).

3.2 MAINTENANCE MANUALS

107. The second task involves the finalisation of the design and its description in a set of Maintenance Manuals for use by MPWU, the urban councils and the International Contractor on the one side (the Employers) and the microenterprises on the other side (the (Sub-)Contractors). The Initial Design Report prepared under the previous task and sent to the counterparts for review will form the basis for finalising the design. This task of the assignment consists of three separate activities:

- **Preparation** – Comments on the Initial Design Report will be requested before the second mission in order to be able to determine what additional information may be needed to be collected during the second mission. The preparation will also serve to organise the meetings with the different counterparts.
- **Mission 2** – A second one-week mission will be carried out to discuss the Initial Design Report, collect remaining information needed to fill any gaps, and finalise the design.
- **Maintenance Manuals** – After the second mission and once the design of the microenterprise maintenance system has been agreed upon, the set of Maintenance Manuals will be prepared.
 - **Procurement Manual** – to assist the MPWU and urban councils in the formation and procurement of maintenance microenterprises.
 - **Inspection Manual** – to assist the MPWU and urban councils in the supervision and inspection of the maintenance by microenterprises.
 - **Technical Manual** – to assist the microenterprises in the technical implementation and planning of maintenance activities.
 - **Managerial Manual** – to assist the microenterprises in the management of their businesses.

Mission 2

108. The second mission will be only for one week and serves to reach an agreement on the different aspects of the design of the microenterprise maintenance system to be applied in Kiribati. It also serves to gather any information not acquired during the first mission or deemed necessary by the counterparts.

109. This mission will start off with a workshop to present the draft design and discuss any comments the counterparts may have. This will be followed by meetings with counterparts to discuss specific comments and to collect additional information required for finalising the design. Meetings with these counterparts will be organised before the start of the mission based on the comments received, and additional meetings may be organised as needed.

Timing

110. The Initial Design Report will be submitted at the end of April 2014. To ensure sufficient time for review and comments, the second mission will be carried out towards the end of May or the

beginning of June 2014. The complete set of Maintenance Manuals will be submitted before the end of September 2014. A complete work programme is included in [Annex 1](#).

3.3 TRAINING

111. The third task under this assignment consists of the training of MPWU, the urban councils and the Kiribati Fiduciary Services Unit (KFSU), as well as the training of the microenterprises themselves. As part of the training will be carried out by the International Contractor (specifically the technical training), proper coordination of this task is required to determine who does what and when to carry out the training. This task of the assignment consists of two separate activities:

- [Training Materials](#) – Once the set of Maintenance Manuals has been completed and any comments incorporated, these will need to be complemented by training material and a training programme. This will be prepared prior to the third mission.
- [Mission 3](#) – A third two-week mission will be carried out to implement the training of MPWU, urban councils, and KFSU as well as of the microenterprises.

Mission 3

112. The third mission will be for two weeks and serves to train the different actors involved in the microenterprise maintenance system. Prior to the mission, training material will be developed to complement the set of Maintenance Manuals and a training programme will be prepared. During the first week of the mission, the MPWU, urban councils and KFSU will be trained. This training will look at the importance of routine maintenance, the formation and procurement of the microenterprises, and the inspection and payment of the microenterprises. This will involve a half-to full-day training in a classroom context using PowerPoint presentations. This training will also make use of the [Procurement Manual](#) and the [Inspection Manual](#) prepared previously as well as complementary training materials.

113. During the first week the training of the microenterprises will also be prepared, identifying suitable locations for the practical training and arranging the necessary tools, equipment and materials (this will partly be done before the mission). The actual training of the microenterprises will take place in the second week. This will be done together with the International Contractor regarding the technical training.

114. This technical training is expected to involve one day of theoretical training to explain the causes of road deterioration, the need for maintenance and the different maintenance activities, as well as the planning and organisation of maintenance activities. This theoretical training will take place in a classroom context using PowerPoint presentations to show different forms of road deterioration and maintenance activities (the presentations will include mainly photographs and pictures). This technical training will also make use of the [Technical Manual](#) prepared previously.

115. This theoretical training will be complemented by a second day of practical training, where microenterprises are given the opportunity to practice implementing different activities along a section of road. For this purpose a suitable section of road needs to be identified and the required tools, equipment and materials need to be provided in sufficient quantities. Although the formal training course will be carried out during this second week, the microenterprises will continue to receive training from the International Contractor in the execution of their work.

116. For the managerial training of the microenterprises, the involvement of the Ministry of Commerce, Industry and Cooperatives as well as other organisations involved in business development will be sought. This will ensure a proper understanding of the business management requirements in Kiribati, and will also form the basis for follow-up later should the microenterprises face any difficulties. The managerial training will be carried out in a classroom context using PowerPoint presentations (mainly to show the different forms to be used) and some role playing and is expected to involve one day of training (the exact scope of the training will be determined as

part of the first two tasks of this consultancy). This managerial training will also make use of the [Managerial Manual](#) prepared previously.

117. At this stage it is planned to have only one training session involving the different microenterprises. This will be reviewed in the course of the first two missions to assess the need for more training sessions based on the number of maintenance workers and microenterprises and their location on South Tarawa. Based on this review it may be decided to replicate the training in two or possibly even three sessions to facilitate participation and to avoid having too many trainees at any one time.

Timing

118. The training of the microenterprises (and to a certain degree also of MPWU, urban councils and KFSU) should be carried out shortly before they are planned to start work. This is likely to be somewhere in the 6 months before the completion of works by the International Contractor. At the moment the works are planned to be completed by May 2015, and the training mission is therefore tentatively planned for November or December 2014 (a complete work programme is included in [Annex 1](#)). However, the exact dates for the training mission will need to be determined once it has become clear when the microenterprises are expected to start work. The situation needs to be avoided where there is a significant gap between the training and the start of work for the microenterprises, as this will decrease the effectiveness of the training.

3.4 IMPLEMENTATION SUPPORT

119. The fourth task under this assignment serves to provide support during the implementation of the routine road maintenance by the microenterprises. This includes general support to the implementation from the home office as well as 4 monitoring missions at 6-month intervals. This task of the assignment consists of three separate activities:

- **General support** – General support to the implementation will be provided from the home office. This support will be based on monitoring data provided on a monthly basis by MPWU and the urban councils based on the Inspection Reports prepared by them (data on road conditions and payments) and the Monthly Reports prepared by the microenterprises (data on person-days, material usage and volumes of work). Any issues identified based on this data will be addressed. In addition, any issues identified by the counterparts during implementation will also be addressed.
- **Missions 4, 5, 6 and 7** – A total of four one-week missions will be carried out during the defect liability period of the International Contractor to review performance of the microenterprises and address any issues identified.
- **Reporting** – A report will be prepared shortly after each mission summarising the findings and recommending any necessary changes to the Maintenance Manuals, the microenterprise maintenance system and the underlying procedures.

Missions 4, 5, 6 and 7

120. The four monitoring missions will each last one week and will serve to review the performance of the microenterprises and to resolve any issues that may have been identified. Based on the findings of these missions, changes may be proposed to the design of the microenterprise maintenance system and the underlying procedures. Reports will be prepared following each monitoring mission describing the findings and any proposed changes to the design.

Timing

121. The timing of the 4 monitoring missions will depend on the start date for the maintenance work by the microenterprises. The first monitoring mission (mission 4) will take place within the first 6 months of operation, with subsequent monitoring missions carried out at 6-month intervals. Tentatively the 4 monitoring missions have been planned for April/May 2015, October/November

2015, April/May 2016 and October/November 2016. However, the exact dates will be determined once the microenterprises have started implementation. A complete work programme is included in [Annex 1](#).

3.5 EVALUATION

122. The fifth and final task under this assignment is the evaluation of the microenterprise maintenance system. This task is actually planned to be carried out after the second monitoring mission (mission 5), assuming that most issues will have been identified by that stage. However, it may be decided to postpone this evaluation in order to allow all lessons learned from the defect liability period and the monitoring missions to be incorporated in the Maintenance Manuals and Executive Report. This task of the assignment consists of two separate activities:

- [Updating of Maintenance Manuals](#) – Based on the findings of the first two monitoring missions and any comments received from the counterparts, changes may be proposed to the microenterprise maintenance system and its underlying procedures. The recommended changes will be incorporated into the set of Maintenance Manuals as required, and a new updated set of Maintenance Manuals will be provided to MPWU.
- [Executive Report](#) – Based on the updated design and the findings of the monitoring missions, an Executive Report will be prepared describing the main aspects of the design, the lessons learned during procurement and the lessons learned during implementation.

Timing

123. The final task does not include a mission and is planned to be carried out immediately following the second monitoring mission (mission 5). As such this task is tentatively planned to be completed by the end of December 2015. However, the exact timing of this task will depend on the timing of the monitoring missions and thus on the start of work by the microenterprises and will therefore have to be reviewed at a later stage. It may also be decided to delay the implementation of this task to a later period in the consultancy (after the third or fourth monitoring mission). A complete work programme is included in [Annex 1](#).

4. REQUIRED SUPPORT

124. In the implementation of this assignment the consultant will require certain support from the Government of Kiribati and the KRRP Project Management Unit, especially in terms of logistics and in obtaining information regarding the Kiribati context.

4.1 LOGISTICAL SUPPORT

General logistics

125. For the duration of the missions, the consultant will require office space for one person with access to photocopy and printing equipment and paper (this will not be used for production of the deliverables). The consultant will also require assistance in making hotel bookings for the missions (where this cannot be done through the internet).

Counterpart staff

126. The consultant will require one counterpart staff to act as a direct day-to-day counterpart in providing information and relevant reports and documentation regarding road management and maintenance and other aspects of Kiribati related to the assignment. During the different missions this person must be able to dedicate at least 25% of his/her time to work directly with the consultant. At other times this person must also have some time available to assist with specific information requirements.

Meetings

127. The consultant will need to organize several meetings with different counterparts during the various missions and will need assistance (either from the counterpart staff or from administrative personnel) in identifying contact persons and setting up meetings.

Workshops

128. There are two half-day workshops planned at the start of the first and second missions. Assistance will be required to organize a venue and all additional items (projector, snacks, tea/coffee, pens, notepads, information packages, copies of presentations, etc.), to identify participants, send out invitations, etc.

Road assessment

129. The sections of the road network to be maintained by microenterprises need to be identified. In addition, common damage to the road network needs to be evaluated in order to determine the maintenance activities to be carried out. For this purpose the consultant will hire a vehicle. These initial site visits require the participation by staff from CED and the urban councils responsible for the roads concerned.

Plant and equipment

130. An assessment is required of the plant and equipment present on South Tarawa and available for hire or loan (either from Government or the private sector). This will require assistance from MPWU in identifying the different locations with plant and equipment.

4.2 INFORMATION COLLECTION

131. The design of the microenterprise maintenance system requires the adaptation of certain design aspects to the Kiribati context. In order to do this, information needs to be collected regarding the Kiribati context. This information is described in detail in chapter 2 of this report and summarised in [Annex 2](#). Most of this information collection involves discussions with MPWU and the urban councils as the main counterparts. However, some information collection requires more comprehensive actions and involves other counterparts.

General design

132. Most of the design of the microenterprise maintenance system will be carried out directly with the Ministry of Public Works and Utilities (specifically their Civil Engineering Division) and the two urban councils as the future employers of the microenterprises. The Project Management Unit of the KRRP project will also be involved directly. This will involve regular meetings during the missions as well as intermittent specific information requests between missions.

International contractor

133. As the microenterprises will receive the technical training from the International Contractor and be subcontracted by him during the two-year defect liability period, a significant part of the design will need to be developed in coordination with the International Contractor, involving several meetings.

Local businesses

134. An assessment of local businesses and their capacities is required to assess the possibility of involving them in routine road maintenance. This will focus especially on contracting businesses (e.g. building contractors). A list of existing businesses is required in order to identify suitable candidates to meet with during the first mission. It is expected that most businesses will be registered with the Ministry of Commerce, Industry and Cooperatives and that that ministry will be able to provide a list of existing businesses and contact details. The CED under MPWU will also be able to identify those businesses which have worked in the road sector in the past. This list is required before the start of the first mission, in order that meetings with local businesses during the mission can already be arranged.

Organizational modalities

135. The microenterprises will need to have an organizational modality that allows them to enter into contracts with MPWU and the urban councils (as well as subcontracts with the International Contractor). To select the most appropriate organizational modality, existing modalities will need to be reviewed. Legislation regarding the modalities of Cooperatives and Limited Liability Companies has already been acquired. Legislation for a third modality of Incorporated Societies has yet to be obtained. It is clear that there are also other modalities in existence (e.g. association, syndicate, partnership) for which it has not been possible to acquire any information. It is expected that the Ministry of Commerce, Industry and Cooperatives (through its Business Advisory Center and its Cooperative Promotion Division) as well as the Ministry of Internal and Social Affairs will be able to assist in identifying possible organizational modalities and the related legislation and regulations, as well as reviewing the suitability of the different modalities for use by road maintenance microenterprises. It may be necessary, however, to seek assistance from a local lawyer in identifying alternative modalities and obtaining the related legislation and regulations. Apart from the identification of the different modalities, the information to be collected should describe the different activities required for registration and operation of each modality in order to be able to select the most appropriate modality.

Operational requirements

136. Although different organizational modalities have different requirements regarding operation, many requirements are the same (e.g. income tax, profit tax, social security payments, annual reporting, auditing). A proper understanding is required of these requirements regarding the costs involved, the timing, the documentation required, the involvement of professionals, etc. This information is not readily available and it is expected that the Ministry of Commerce, Industry and Cooperatives (through its Business Advisory Center and its Cooperative Promotion Division) will be able to assist in obtaining this information. In addition, these aspects will be discussed with local businesses to assess the difficulty of complying with the different requirements.

Procurement modalities

137. The exact procurement modality to be applied and the relevant requirements under Kiribati law (including the structure and contents of the bidding documents) will need to be identified. Although a copy of the *Procurement Act* (2002) has been obtained, there may be additional documents and regulations relevant to the procurement of microenterprises. It is expected that this information may be obtained with the assistance of the Ministry of Public Works and Utilities and their procurement staff. However, this may also involve the Ministry of Finance and Economic Development.

Tools and (safety) equipment

138. The types and quantities of tools and (safety) equipment will be determined in coordination with the Ministry of Public Works and Utilities, the two urban councils and the International Contractor. This will also look at the possibilities for acquiring or hiring these items locally, and the costs involved.

Materials

139. The materials to be used and the estimated volumes required will be determined in coordination with the Ministry of Public Works and Utilities, the two urban councils and the International Contractor. This will also look at the options for acquiring these materials, and the costs involved.

Maintenance funding

140. Information on levels and sources of funding for maintenance in the past five years and expected levels for the next five years will need to be obtained. This will also look at the wider context of the revenue and expenditure of the Government of Kiribati. It is expected that maintenance funding data from the last five years will be available from the Ministry of Public Works and Utilities as well as the urban councils, while data for the next five years and general budget data will need to be obtained from the Ministry of Finance and Economic Development.

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1990, Government of Kiribati

Income Tax Act

1989, Government of Kiribati

Public Highways Protection Act

ANNEX 2 – QUESTIONS TO BE ANSWERED

This Annex indicates which counterparts will be involved in answering the questions identified in Chapter 2. The counterparts include the following:

- Ministry of Public Works and Utilities (MPWU), especially its Civil Engineering Department (CED)
- Teinainano Urban Council (TUC) and Betio Town Council (BTC)
- KRRP Project Management Unit (PMU)
- Ministry of Finance and Economic Development (MFED)
- Ministry of Commerce, Industry and Cooperatives (MCIC), especially its Business Advisory Center (BAC) and Cooperatives Promotion Division (CPD)
- The International Contractor for the project civil works (IC)
- The Design and Supervision Consultant (DSC)
- Local (contracting) businesses (LB)
- Relevant local organizations (LO)

Questions to be answered	MPWU (CED)	TUC / BTC	PMU	MFED (KFSU)	MCIC (BAC/CPD)	IC	DSC	LB	LO
What activities will be carried out by the microenterprises?	X	X	X			X	X		
What is the expected timing and frequency of the maintenance activities?	X	X	X			X			
How is road maintenance currently being carried out?	X	X	X						
What capacity exists regarding businesses, contractors and skilled personnel in Tarawa?	X	X	X		X	X		X	X
Will the microenterprises be based on existing businesses or created from scratch?	X	X	X		X	X			
How many workdays will be required per kilometre per year?	X	X	X			X			
How many kilometres of road (and which roads) will be maintained by the microenterprises?	X	X	X			X			
How many days a year will the microenterprise workers work (full-time or part-time)?	X	X	X	X	X	X			
What would be a suitable packaging of the roads to be maintained by microenterprises?	X	X	X	X		X			
What criteria will be used for selecting the microenterprise workers?	X	X	X	X		X			
How will people be informed of the microenterprise employment opportunities?	X	X	X			X			X
How will interested candidates be ranked and selected?	X	X	X			X			X
Will the microenterprises be individually owned or communally owned?	X	X	X		X	X			
What organizational modality is most appropriate for use by road maintenance microenterprises?	X	X	X		X	X			
What procedures exist for the registration and operation of the selected organizational modality?	X	X	X		X	X			
Are there any obstacles to introducing performance-based contracts?	X	X	X	X		X			
What performance standards will be applied?	X	X	X			X	X		
What targets will be set for the different performance standards?	X	X	X			X	X		
What type and level of penalties will be applied in case of non-compliance with the performance standards?	X	X	X			X	X		
How will the microenterprises be selected and contracted during the defect liability period?	X	X	X			X			
What procurement modality will be applied after the defect liability period?	X	X	X			X			
How can sustainable competition in the road maintenance sector be ensured in Kiribati?	X	X	X	X	X	X		X	

Questions to be answered	MPWU (CED)	TUC / BTC	PMU	MFED (KFSU)	MCIC (BAC/CPD)	IC	DSC	LB	LO
What needs to be included in the bidding and contract documents?	X	X	X			X	X		
What types and quantities of tools and (safety) equipment are required by the microenterprises?	X	X	X			X	X		
How will the tools and (safety) equipment be provided to the microenterprises?	X	X	X			X	X		
What equipment is available for rent or loan in South Tarawa?	X	X	X			X	X	X	
What materials will be required by the microenterprises (including approximate volumes)?	X	X	X			X			
How will the different materials be provided to the microenterprises?	X	X	X			X			
What should be the content of the training of MPWU, the urban councils and KFSU?	X	X	X	X					
What should be the content of the technical training for microenterprises?	X	X	X			X	X		
What should be the content of the managerial training for microenterprises?	X	X	X		X	X	X		
Who will develop and carry out the different training activities?	X	X	X		X	X	X		
How will the supervision of the microenterprises be carried out (during the DLP and afterwards)?	X	X	X			X	X		
How will the inspection of the microenterprises be carried out (during the DLP and afterwards)?	X	X	X			X	X		
How will deductions be applied to the monthly payments in case of non-compliance with the performance standards?	X	X	X	X		X			
What requirements exist for opening a bank account in the name of a microenterprise?			X		X			X	X
How much time is required to process the payments to the microenterprises?	X	X	X	X		X			
What is an appropriate wage rate for maintenance workers (daily, monthly)?	X	X	X	X	X	X		X	X
What is the expected average cost of labour inputs per kilometre of road?	X	X	X			X			
What are the costs for the different tools and (safety) equipment required?	X	X	X			X			
What is the expected average cost for materials per kilometre?	X	X	X			X			
What taxes and other operational costs need to be paid by the microenterprises?			X		X	X		X	X
How much funding is available for road maintenance (main, secondary, feeder roads)?	X	X	X	X					
How is road maintenance funding expected to change over the next 5 years?	X	X	X	X					