



Tunisia: National Guidelines for Structural Integration of the Informal Sector in **Solid Waste Management**

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I. Background



GIZ via SWEEP-Net is currently implementing the BMZ financed project entitled "Structural Integration of the Informal Sector into the Municipal Solid Waste Management in Tunisia". The project started in January 2014 and ends in June 2015.

The objectives of the project are to improve the income and livelihood of the informal sector workers while also improving the municipal solid waste management system in two pilot municipalities. The main areas of activity were:

- to design and implement pilot actions in the cities of La Marsa and Ettadhamen-Mnihla, to test and learn from the integration of the informal sector value chain into the public service chain;
- to carry out a high level dialogue with national stakeholders aiming at the professionalization and the social, technical and financial integration of the informal sector; and
- to build capacity for local and national governance for inclusive waste management.

1.1. Purpose of the document

The purpose of the present document is to consolidate the knowledge, experience and lessons learned during the project implementation, and to formulate meaningful and applicable guidance for the integration of the informal sector at the national level.

During the project implementation we carried out a needs assessment and maintained a continued communication and outreach with street waste pickers and collectors. The citizens and key citizen associations were consulted through customer surveys, focus groups and meetings. Open or semi-open interviews were held with local and national stakeholders. There were local platform meetings hosted several times by the partner municipalities of La Marsa and Ettadhamen-Mnihla. An ongoing high level multi-stakeholder dialogue was secured through regular meetings of the project's Follow-Up Committee and Working Groups for Access to Finance and for Social Integration.

The project has also designed and implemented technical approaches to integration of street pickers into the solid waste management system in four pilot areas in the two partner municipalities. These pilot actions are an opportunity to learn about the management and monitoring of an informal sector technical integration,



as well as the relative efficiency of the different integration methods.

The document will give recommendations (i) for rolling out technical integration at the municipal level and (ii) for changes to the current legal and policy framework enabling the structural integration of the informal sector into the solid waste management system.

1.2. Rationale

There is an ongoing and evolving debate regarding the involvement of the informal sector in solid waste management in general. The rationale starts with three principles that are difficult to contest in case of any waste management planning or improvement:

- first, any plan for waste management solutions or improvements should start from a correct assessment of the existing situation. If that situation already includes an informal sector activity in waste management, then it is better to take this sector into consideration than to ignore it;
- second, to build on what already works is a good practice; and
- third, modern waste management also means a well functioning recycling/ valorization component, including a reliable supply chain for it.

We do not argue that informal sector waste picking in its current form is good and should be promoted, but rather that informal sector integration should be seen as a strategy towards modernization in the medium term.

Both the international and the Tunisian pilot projects' experience has proven **benefits of integrating the informal sector** into the solid waste management system:

- higher capture rate for recyclables and higher levels of diversion from landfilling
- higher income potential for the waste pickers, who belong to the group of the marginalized urban poor

- less pressure on authorities to provide social aid
- improved social status and professional recognition for the informal sector
- better community cohesion, less social tension, discrimination, poverty
- better street security
- improved cleanliness at no cost to the city
- extended service coverage at minimal cost to the city
- reduced costs of collection and landfilling
- new cost efficient service options

On the other hand **excluding the existing informal sector** from the solid waste management system **carries risks**:

- tension and conflict between formal and informal waste management sector and competition for resource streams
- stigmatization and harassment of waste pickers, likely creating social problems
- dirty streets, poorly maintained communal bins and low street safety
- increase of poverty levels, leading to social problems of the waste pickers, and by consequence increased need for state welfare

While the benefits are numerous, there are certainly difficulties along the way, and successful integration does not happen overnight. Some of the **main challenges of informal sector integration** are:

- cooperation with the informal sector is difficult and time-consuming, and demands a lot of training and capacity building on both sides,
- health and safety issues
- environmental control
- potentially reduced recycling value of the municipally collected waste streams, and as well as reduced space for the municipality to develop and support new recycling systems, and
- potential obstacles in eliminating child labor.

For these reasons, informal sector integration is recommended for Tunisia as a medium term,



transitional solutions toward a modern municipal recycling system. The process of formalization should improve and modernize waste management while simultaneously improving the livelihood of the informal sector workers.

As a long term goal, integration should lead to options for exit strategies for the next generation of waste pickers - either to remain in the formal, modernized recycling system in Tunisian cities, or have exit options to pursue a profession of their choice sustained by a stronger family and state based social safety net. We understand that this vision is most likely a long-term goal be realized by - and for - future generations.

1.3. The Tunisian informal sector



The unseen recyclers of the cities

In Tunisia, significant informal sector activity in recycling can be found at the margins of the waste management system. Informal sector workers are currently the building blocks of recycling activities, which again constitute a key element of modern well-functioning

systems. According to the SWEEP-Net Country Report, the municipal solid waste of Tunisia contains 68% organic components and 32% dry, mostly recyclable parts, while only 4 % of the latter is recycled. Of the generated total of 2.423 million tons of waste per year, 4% make up about 9.000 tons. Minor exceptions set aside, the supply chain for recycling in Tunisia is entirely made up of the informal sector suppliers.

Livelihoods through green jobs in recycling

The number of informal sector recyclers in Tunisia is not currently known. Starting with the ballpark figure of about 100 thousand tons of packaging waste¹ being currently recycled in Tunisia and 99% of this material being supplied by waste pickers, we estimate that their number is about 15 to 18 thousand people. The average waste picker earns about 10 Dinar a day, selling a mix of materials weighing about 15 to 20 kg. The informal sector 'barbechas' are not a homogenous group; they comprise waste pickers working on dumpsites and on the street, small scale mobile collectors, junk yards, larger collectors, larger scrap yards and processing units. Many of the waste pickers are professional or semi-professional, working in the trade for more than 7 years, often for 30 years or even for generations. In effect, most of these recyclers are entrepreneurs, the lack of investment and working capital being the only impediment keeping them from moving up in the recycling chain and earning higher and more secure income. As the numbers show, this industry sustains a significant number of livelihoods, which, in addition, are urban green jobs, as they contribute to the cleanliness of the cities and higher recovery rates of recyclables.

Waste picking is a source of livelihood for vulnerable groups

Waste pickers often come from socially disadvantaged groups, by which we mean a group of people who are among the poorest and most vulnerable group of society. These pickers usually work in recycling part time to add to their other income; they have no equipment, are in the trade for a few years only and have no interest in staying in the profession. This group often includes people who have more than one, sometimes

1. SWEEP-Net Country Report, Tunisia, 2013, http://www.sweep-net.org/sites/default/files/TUNISIE%20RA%20ANG_0.pdf



sick dependants, are raising children on their own, are women, are elderly living on very small pensions, or people with some kind of handicap or disease. This vulnerable group needs a different type of attention, first and foremost social integration and access to basic social and health services.



2. Methods of engagement



With the exception of the current project, it can be said that the informal sector in Tunisia is presently not organized in any clearly recognizable form. The only organization around the buyers and the supply chain is purely business driven. Collection points (scrap yards) are the locations where waste pickers meet, discuss their trade, and identify each other as being part of the same profession and belonging to the same social strata. It is here that they form loose relationships based on mutual respect.

If an external party would like to communicate with the individuals in the informal sector, an informal approach is needed. Formal stakeholders have no counterpart yet in the informal sector; and the informal sector in turn has no official representation. If the informal sector is to be treated as a stakeholder and a partner, the first steps are mobilization, trust building and stimulating some form of organization building.



2.1. Mobilizing and building of trust

The project took the first steps and approached the barbéchas with a local team for community mobilization.

For this purpose, we have used several methods: private informal meetings with individuals and meetings in small groups, dialogue within a wider group, and finally meetings with the institutional partners and civil society representatives. Based on this comprehensive consultation, we were able to compile a list of the needs of the informal sector as they were identified and conceived in the respective settings:

- **Informal meetings with individuals and in small groups:**

In the beginning, in order to get in touch with and to mobilize the barbéchas, we met waste management staff of the municipality who already had a regular contact with them. We visited the waste pickers together with the municipal personnel and explained to the waste pickers the purpose of the visit and importance of their role in the project. At every scrap yard we visited, we asked consent of the owners to talk with the barbéchas, who came to sell the materials they had collected. Most of them came once or twice a week, some daily. We have also met the barbéchas working at the disposal sites (at La Marsa and at Borj Chakir).

The meetings were conducted in the local Arabic dialect. Records from these meetings included the name, given name, family status, level of education, position, phone number, the type of collected material, the daily collected amounts, problems and needs, and the stories told by barbéchas. The information was drawn from informal conversations. The questions were loosely structured; the experts had prepared a check list of issues to pursue in advance that guided the dialogue and interviews. Photos were taken with permission of the waste pickers. At the end of each day, the experts transcribed the notes and set up a research journal, including the raw data, the stories, the observations and quotes.

One of the findings of these first encounters was that there was a general mistrust on the part of the barbéchas towards public authorities. In general, to achieve results from their encounters with the public administration had proven to be difficult. In addition, they found themselves in competition with the formal sector waste management workers for certain valuable waste streams.

- **Organized dialogue:**

Starting during the first week, larger meetings took place in informal locations: in La Marsa, this proved to be one of the scrap yards and in Ettadhamen-Mnihla, in a building under construction, made available with the support of a scrap yard owner. These two scrap yard owners, who were the first to volunteer and to get involved, have helped the organization of barbéchas and in getting them mobilized, and they also provided advice regarding the choice of dates and of hours etc. to the team. Following the initial findings of there being a lack of trust towards public authorities, the meetings were organized between the waste pickers and the project team, without the participation of any officials.

During the first dialogue, which took place in Ettadhamen-M'Nihla, we met about 50 persons, a third of whom were "social cases", and were not interested in the project. "Social cases" were people belonging to various vulnerable groups, such as the poor, ill,

disabled, or otherwise vulnerable persons, but who are not involved in recycling activities. These people came in the hope to receive some aid or donations. During the first meeting, the objective of the project was made clear, thus during the second dialogue, in La Marsa, we met 20 persons, including waste pickers, collectors and scrap yard owners, successfully minimizing the presence of "social cases".



During these dialogues, we presented the project and gave every person the opportunity to introduce themselves and present their problems. We announced the need for the group to designate two or three representatives to attend the future meetings with the formal stakeholders, and we set the date for the following dialogue. The dialogues were facilitated by the national expert and were held in the local Arabic dialect. A simultaneous translation into French was provided to the international expert, which allowed him to contribute, to ask questions and to also participate in the dialogue.

- **Contacts with the formal partners**

At the same time, the team made contact with representatives of the responsible national and local public authorities, local neighbourhood associations and representatives of the civil society. This progressive and participative approach allowed the team to understand the reality of the sector and to evaluate the needs of the barbéchas and collectors. The pragmatic methodology was adopted to facilitate the true understanding of the sector from the technical, social and economic point of view.



LESSONS LEARNED

«Nothing about us without us»

- The start of the process requires support of communication experts and of a local team to assure community mobilization
- In general, the barbéchas have tense relations with the public authorities, and they often do not trust them.
- The consolidation of a relationship based on mutual trust is essential for any mobilisation.
- Preliminary research needs to be conducted to identify suitable informal sites for establishing first dialogues with the barbéchas
- This community must be approached progressively, with an open mind, without preconceptions, and without assuming beforehand the needs, strengths and weaknesses of the sector
- It is necessary to understand the reality of the sector in order to evaluate -in a participative manner - the needs of the informal sector at the technical, social and economic level

2.2. Communication

2.2.1. Communication with formal stakeholders

While the project was mobilizing and engaging the informal stakeholders, it also set out to mobilize formal stakeholders. This process started by identifying the main stakeholders, i.e. those interested in informal sector integration and those with the capacity to influence the process. This was done through a kick-off Workshop close to the beginning of the project (April 2014), and continued with further one-to-one meetings. The main formal stakeholders were the National Solid Waste Management Agency ANGED, the former Secretary of State for Sustainable Development, the Ministry of Health, the Ministry of Social Affairs, the Ministry of Employment and Vocational Training, the Ministry of Interior (with its child protection



unit), the Ministries of Youth, Sports, Women and Family, ENDA inter-arabe, BTS, Taysir, TAMSS, the municipalities, other NGOs and associations, public and private companies and informal waste pickers and transporters.

Following the needs assessment that took place after the kick-off workshop, a first platform dialogue was organized in September 2014, with the participation of the most influential and interested stakeholders. The strategy of a platform dialogue was kept for the remainder of the project for the larger group of stakeholders. At the same time, a steering committee was set up for the key stakeholders, understood as those key players with high power and interests aligned with the project. They have a differentiated perspective of the problem, and their full engagement is needed to place the integration of waste pickers higher up on the political agenda. In this case, the key players are representatives of the pilot municipalities, representatives of the governorates, ANGED, TAMSS, ENDA and SWEEP-Net. Reports of the stakeholder meetings and of the meetings of the steering committees were always drawn up and sent to a wider list of interested partners.

In the pilot areas, local stakeholder meetings took place between the municipalities, the local NGOs and



associations and the representatives of the barbéchas. Similarly, local steering committees were established to follow up on the pilot operations. In order to keep the communication channels open between the municipality and the barbéchas, a liaison office in each municipality was established and run by local coordinators.



The other stakeholders were kept informed through a regular newsletter that was edited by SWEEP-Net, sent to all stakeholders and posted on the SWEEP-Net Website. Project documents, including articles and reports were made available to all stakeholders and the wider public through the SWEEP-Net website www.sweep-net.org.

2.2.2. Internal communication among Barbéchas

Until the implementation of the project, the internal communication among barbéchas was limited to casual meetings at scrap yards during the sale of the recyclable materials. It is very rare to see barbéchas sitting at a table together, sipping coffee and chatting. After some out meetings and dialogues, the designation of representatives and eventually with the start of the procedures to establish associations, the relations appear to have been strengthened. The barbéchas call the scrap yard owners or often pass by the scrap yards, to ask for news concerning the progress of various issues.

Additional tools were developed to improve the communication among the barbéchas and between barbéchas and other stakeholders. A newsletter written in Tunisian Arabic was designed with articles regarding the activities and advancement of the Associations of the barbéchas, and was consequently placed at the collection points and distributed to barbéchas. For

the communication between the barbéchas and the wider public, a facebook page was set up. Concerning the pilot operations, awareness raising materials (stickers, fliers, banners and calendars) were developed and used to communicate with the wider public. Significantly, the barbécha Associations now have flyers and business cards to present themselves and to make their association known to potential national and international donors. All these instruments are designed using a visual identity and slogans that were developed together with the barbéchas.

LESSONS LEARNED

- The communication with the stakeholders, either at the local or at the national level, needs to take place through official meetings, where the meeting's minutes are recorded and subsequently shared.
- A steering committee, both at the national and at the local level, is necessary to monitor day-by-day developments, to update the activities of the project and to report the progress of commitments of the major stakeholders.
- A liaison office allows for a permanent communication channel between the informal sector and the municipality.
- Various instruments may improve the internal communication among barbéchas, but nothing can replace the direct contact between the project team and the barbéchas.
- In order to coordinate this process, it is necessary to have at least one local coordinator, assisted by various experts.
- The implementation of the pilot operations will be facilitated by the placement of local coordinators in the pilot locations.
- In order to maintain communication, the involvement of external facilitators is needed in the short to medium term. This external facilitation needs to be intense in the beginning, but can be progressively reduced, as the group will be increasingly able to rely on their own leaders for communication.



2.3. Training and capacity building

During the field work, a series of needs regarding capacity building was identified. These areas are:

- Skills for representation of common interests, public talks, and negotiation with formal stakeholders
- Issues related to financial management and business planning, and access to financing

Another important need was not immediately present, but developed gradually among the barbécha as they grew to understand that all their other needs can only be met through a dialogue and in partnership with the formal stakeholders. From this arose the need to:

- Get organized, and obtain an authorized representation

Processes:

The barbéchas' requests were identified during the various meetings and dialogues and concerned first of all basic needs and rights: health, financial aid, limitation of competition between the informal sector group and formal, public services waste workers. Later, as the process of empowerment took on, the needs of the group evolved to incorporate requests related to professional recognition and representation of their interests, including the formation of organizations (associations etc.).

LESSONS LEARNED

Informal sector identifies its needs:

1. Facilitate the access to preferential credits for barbéchas and for the collectors, especially to purchase means of transport
2. Organise social protection
3. Establish a one-stop-shop type access to the local administration/ municipality (guichet unique)
4. Separation of work between workers in the sanitation service of the municipality and the barbéchas
5. Facilitate door-to-door collection of recyclable materials, especially of PET bottles
6. Contribute to the creation of an association to defend the interests of barbéchas/collectors with a representative office recognized by the public and private bodies, militating to recognize the trade (uniforms, badge etc.)
7. Contribute to the implementation of a cooperative of informal collectors for the common use of assets and equipment (storage place, ball press and shredding machine)

2.4. Getting organized

During the initial implementation phase it quickly became clear both to barbéchas and to other stakeholders that a representation and organization of the informal sector is necessary to ensure that its voices are heard. This was a need that emerged and evolved during the project.

The barbéchas themselves identified this need to get organized, and they discussed in community meetings about the best form of organization. Such discussions did not occur during the first meetings, but only came about later, in the process of identifying the route of their integration and once a certain level of trust was built among the barbéchas. They were considering an association or a syndicate/trade union, and both routes were presented to them in detail.

The members of the working group committees, specifically the elected presidents and secretaries quickly stepped into their roles, identified with the organization and their task, and started speaking up



for the community of barbéchas in various meetings. Their growing sense of responsibility could be noted especially in instances when they said on certain issues they were not in a position to make decisions, and would need to go back and consult the members of the Association. A delegation of decision-making power also happened almost instantly, since they prepared meetings internally and on certain points of negotiation with formal stakeholders they were able to make decisions on behalf of their Association.

LESSONS LEARNED

1. The issue of organization can come only after the building of trust, and after several community meetings took place.
2. The initiative needs to come from the informal sector; it cannot be imposed on them.
3. The informal sector needs information and capacity building to understand different forms of organization and their respective advantages and disadvantages.
4. It is most likely that the informal sector will need assistance in preparing the legal documents of the organization and registering the organization.
5. Representation needs to be approved by a large and transparent community meeting and voting process.
6. The mere existence of the organization empowers the informal sector and gives a counterpart for formal stakeholders to talk to.

3. Social integration



The social integration of the informal sector of waste pickers includes the measures that allow these workers to benefit from the rights that employees are entitled to: access to social assistance, retirement and unemployment insurance.

Social integration also has a more intangible but equally important element - that of recognizing the sector as a valuable part of society and its workers as persons belonging to a value-generating professional trade. The feeling of self-worth and professional pride can start to be built through the simplest forms of recognition such as publicly saying that the informal sector is creating value for the city, or making a municipal registry of

informal sector workers and maintaining a database of those who have the right to waste picking in a certain area.

These objectives are discussed taking into account the specificity of the activity which must be clearly defined and could be summarized as follows:

- The activity of waste picking is mostly an individual activity.
- Working conditions are undefined: working hours and working place are not clearly defined.
- Street picking is a stressful, physically tiring and often dangerous activity.

As it is an informal activity, it is clearly shown that the waste pickers do not benefit from facilities ensured to formal sectors.

Consequently, we are recommending that specific facilities should be developed to meet their needs that fit into the current legal system or necessitate little alteration to the current rules and regulations.

Firstly the following aspects should be considered:



- The social status of informal recyclers includes various categories in terms of age, gender, family status, level of income, status of health, etc. Strategies should take into consideration the differences between categories and be adapted to meet the needs of each category in a practical way;
- The access to rights must be coupled with the acceptance of certain obligations such as payment of taxes and private declaration of revenues. Hence, an additional set of recommendations is added, concerning social liability, to help the informal actors cope with these obligations.

In the current state of the legal framework in Tunisia, the access to social rights is conditioned by the professional recognition of the activity. This accentuates again the need for professional recognition.

3.1. Professional recognition

The activity of sorting and recovery of recyclable wastes for re-sale exists, but it is not recognized, from the legal point of view therefore it does not exist. On the one hand the activity creates value by recovering materials, and on the other hand it also contributes to the collection of domestic wastes.

The recommendations include: i.) actions at the municipal level to integrate the activity in the service chain of collection and management of municipal waste, and ii.) recognizing this activity at the national level as a trade and "green occupation".

3.1.1. Recognition at municipal level

Municipal level recognition is a basic level of acknowledgement from local authorities to the informal sector. This is an important first step in working towards full recognition of this sector. The municipalities are responsible for the waste management of the cities (this responsibility arises from the Organic law of communities 95-68). Municipalities are closest to the informal sector and know some of the individual waste pickers who interact with formal sector workers.

The objective of municipal recognition is to accept and anchor the position of informal recyclers as regular partners of the municipality, meaning:

- Recognized partners as actors in the management of waste, adding value to the city by ensuring recovery of materials, saving collection costs and disposal costs,
- Regular partners, namely committed on the long run to enter into cooperation with the informal sector

This route of recognition is part of the technical integration process, which is presented in Chapter 4 of this guideline. Once recognized as partners, different models of cooperation are possible, which are discussed in Chapter 4.

3.1.2. Recognition at the national level

Professional recognition at national level is subject to formal administrative procedures, constraints and opportunities.

The purpose is to have the trade of waste picking and recovery of materials clearly defined as a profession by administrations and responsible organizations.

According to Decree no. 97-2452 of December 15, 1997, providing institutions with a national nomenclature of vocations, this definition is transposed by the



registration of the trade in the national dictionary of professional vocations, which is managed by the National Observatory of Employment and Qualifications under the Ministry of Labour and Vocational Training.

A national working group has been established in the framework of the project in order to define the various steps to be followed and the legal procedure for the trade to become part of the nationally recognized vocations. These steps are the following:

- Set up of a questionnaire based on a checklist to define the tasks, skills and conditions necessary to work in the trade.
- Meetings between the representative of the ministry of labour and of vocational training and the representatives of the trade to validate the data in the questionnaire.
- Developing a draft trade definition and description chart.
- The trade chart will be subject to validation by a technical committee consisting of owners' organizations and trade unions, representatives of the trade, ministries, etc.

It has to be noted that the registration on the list of recognized trades does not automatically create legal rights for those working in the profession.

3.2. Access to social and health services

3.2.1. Access to social security

The access to the social security is mainly governed by the law 60-30 of December 14, 1960, organizing the systems of social security through the National House of Social Security (CNSS). The services provided are: family allowances, social security, pensions and medical insurance. To benefit from all these services, any worker must therefore be affiliated to CNSS.

Article 34 of the Law enumerates the categories of workers that have the right to affiliate with the CNSS.



The workers in the informal sector do not belong to any of these categories, which emphasises the need to introduce this new category.

Technically, the recommended road for integration is as follows:

- The informal sector working in waste recovery must be identified through the trade chart.
- Consultation with the concerned ministries must be realised.
- The ministry in charge of the environment needs to send a communication paper to the other concerned ministries to explain that the trade needs to be covered by the law.
- A draft law needs to be proposed to the government by one of the ministries or by the associations of the barbéchas through one of the ministries.

These provisions apply to the persons that have a declared employment, and this means either that the concerned party should be self-employed, or be employed. The Associations could act as an employer.

As concerns the informal collectors that work as self-employed persons, the procedure requires either a patent obtained from the tax services, or the establishment of a formal enterprise.

To accomplish recognition it is recommended to provide sessions of training to informal recyclers focusing on the formalization of activities, mainly on the administrative procedures. Indeed (acc. to the

TILI report), a great majority of informal workers are unaware of the administrative provisions.

3.2.2. Access to social aid and health care

In parallel with the judicial and administrative endeavour, it is recommended to develop the access of vulnerable informal recyclers to social aid and to free medical care, to answer emergency situations, without waiting for a formalisation process that could be very time consuming.

This requires the implementation of a medical or social monitoring system in the frame of the association of workers of the informal sector.

It has been proposed to organize such a system around the following facilities:

- Establishing and staffing a reception desk for evaluation of the social security status of socially vulnerable recyclers within a liaison office;
- Regular partnership with a social worker to whom the vulnerable persons could be directed;
- Regular sessions of information/awareness raising regarding health and safety issues in waste picking and recycling
- Medical prevention campaigns and vaccination campaigns by the Care Centres of the Ministry of Health or by NGOs.

3.3. Corporate social responsibility

Economic actors who establish corporate social responsibility principles and programs aim at providing the most favourable environmental and social conditions for their employees, their regular trading partners and the communities they interact with.

Informal recyclers have two final «clients»:

- In terms of the activity of collecting waste, the waste pickers are part of the public service chain of waste

removal; as such, they are service providers of the municipalities or, more directly, the inhabitants.

- In terms of the activity of supplying recyclable materials to the recycling value chain, they are regular suppliers of the large collectors and recycling factories.

For the implementation of social responsibility of the enterprises dealing with the informal workers, the respective enterprises must be identified at first. This is not very easy for the formal sector, because under current legislation, admitting to the purchase of recyclables from informal providers is considered an offense.

It is therefore recommended to proceed with caution to obtain all the necessary information and to establish a positive dialogue with these enterprises, preferably through small collectors and professional organizations (like UTICA - l'Union Tunisienne de l'Industrie, du Commerce et de l'Artisanat).

Specifically, the commitment of enterprises, of municipalities and neighbourhood associations could take the following forms:

- Guarantee of a minimum price of purchase and direct access to buyers who guarantee those prices for the recyclable materials. The conditions for this arrangement could be negotiated annually by the associations of informal sector workers in exchange of a commitment to deliver a specified quantity.
- Taking on the liability for the entire, or at least part of, the social security contributions of informal recyclers members of an association and adhering to certain cooperation agreements with formal partners.
- Contribution to the purchase of individual health and safety protection equipment for the informal recyclers.
- Contribution to the organization of health protection and vaccination campaigns.
- Acting as guarantees for micro-credits



4. Technical integration and operator models



4.1. The main issues

Competition for materials

In Tunisia, neither integration nor accommodation of the informal sector and the public service chain exists. Both work in parallel and often compete with each other for the same materials. The informal sector is working as a supplier of the recycling value chain and is looking for the same materials as the public service waste management workers, who are paid not for recycling, but for delivering the waste collection service.

This takes the form of truck picking. Often the public sector workers are separating valuable materials from waste and are selling them to the recycling value chain. This creates competition, tension and often conflict between the public sector workers and the barbéchas.

Littering and nuisance for citizens

The waste pickers organize so that they do their collection routes just before the public collection service is scheduled, to ensure that they have access to the best materials. They often work in a rush, sometimes at night when visibility is poor, and often leave a mess around their containers or near the waste set out for pick-up. Therefore the waste pickers are blamed for leaving a mess on the streets.

Recycling value chain	Public collection service
Driven by the value of the recyclable material	Driven by the demand for waste removal
Informal sector workers	Public sector workers

4.2. Rules of operation

It is recommended to further develop the already existing draft agreement rules of operation to include at least the following items:

- Roles and obligations of all implementing and supporting actors
- Rules of operation
- Technical and logistical specifications
- Cleanliness requirements of the municipality
- Penalties in case of non-compliance

It should be noted that penalties in case of non-compliance are unlikely in the piloting phase, however some sort of public recognition of good behaviour, or a competition on the Facebook page of the project could substitute formal enforcement in the pilot phase.



4.3. Pilot areas for integration in the city of Tunis

Four pilot districts were selected, two in La Marsa and two in Ettadhamen-Mnihla based on an agreement among the implementing parties.

Baseline setting

Prior to starting the pilot activities, a baseline was established for recycling rates and the productivity of the work of the barbéchas. These indicators, together with cleanliness indicators were monitored regularly during implementation.

Three methods of integration were piloted:

Door-to-door collection of source-separated recyclables
In this method, selected waste pickers go from house to house at a pre-established time and collect source-separated plastic and cans. The participating households all received a plastic bag for source separating recyclables. The households who prefer a bell-ring system place a sticker on their door signalling that they wish to be called upon. Other households place their recyclables outside their home in a convenient place for the barbéchas. The materials are often hanging on a nail or a hook to prevent access of stray dogs and cats.

Data point	Unit of measurement	Frequency
Recycling rate		
PET collected	Kg/week/ district	Weekly
Cans collected	Kg/week/ district	Weekly
Recycling rate for PET	%, Calculated	Weekly
Recycling rate for cans	%, Calculated	Weekly
Productivity of work		
Efficiency of logistics	kg/km per barbecha	Weekly
Efficiency of logistics	kg/route per barbecha	Weekly
Productivity	kg/day/ barbecha	weekly
Cleanliness		
Littering on the main streets	Description, photo	Bi-weekly
Littering on the inside streets	Description, photo	Bi-weekly
Municipal services		
Adherence to schedule	Description	Weekly
Adherence to routing	Description	Weekly



Overall, this has proven to be a positive experience, where the participating households and the barbéchas both kept their commitments, and the indicators show positive results in terms of increased recycling rates and productivity rates for the barbéchas involved.

Collection of source-separated from communal mesh boxes

In this method, the residents place their source-separated recyclable materials in a mesh box placed in the vicinity of their home. The barbéchas responsible for collection have a key to the mesh-boxes and collect the materials at a pre-established time.

This experience has produced mixed results as some of the mesh boxes were stolen and others vandalized. The amount of recyclables collected from mesh boxes is lower and the recycling rate is lower than in case of door-to-door collection.

The mixture of the two methods above

The mixture of the two methods above was also piloted in La Marsa and the results of this experiment also show better results than mesh boxes alone, but they are somewhat lesser than door-to-door collection alone.

The success of the various methods also depended on the specifics of the neighbourhood where it was implemented and the conditions that existed there, and can only be partially attributed to the method of

collection used. The conditions that contributed to the success of a particular neighbourhood include:

- a highly active informal sector in the district
- relatively low income
- active involvement of barbéchas in awareness raising.

In all cases, technical integration involved the following control factors:

- a customer satisfaction survey to understand the needs and preferences of the citizens
- an awareness raising campaign with the involvement of volunteers and in some cases of the barbéchas themselves
- support with plastic bags, containers, equipment from the part of the formal stakeholders
- distribution of uniforms and protection shoes to barbéchas
- the registration of barbéchas engaged in the project in the Associations
- giving out badges that authorize Barbéchas to collect in a certain pilot area

LESSONS LEARNED

1. Long-term awareness raising and engagement with citizens users is necessary for source separation and integration.
2. Door-to-door collection of dry recyclables by informal sector workers is a successful model.
3. Institutional support from the municipality through provision of storage place, equipment, and access to health care, or payment for the service, would likely improve results.
4. Giving out uniforms and identification badges that make barbéchas recognizable is essential to obtain a better (self-)perception of the barbéchas.



4.4. Operator models for integration

As trust-building and dialogue evolves, so do the methods of cooperation. All partners prefer a more loose cooperation at the beginning, and once they gain confidence, they will likely move on to more formal commitments.

Step 1: Cooperation agreement with the organization of the barbéchas

This is the form of cooperation that took place in the project and it was the choice of the partners to cooperate in this manner. This came down to sitting together at formal platform meetings and agreeing on the roles, obligations and rights of the implementing partners: the municipality, the Association of the Barbéchas and the Neighbourhood Associations.

After the first month of this cooperation, and having seen a fairly solid commitment from all partners, the Municipality of La Marsa stepped up to offer a service contract to the Association for cleaning the beaches of the municipality. A neighbourhood association offered to pay for the social and health contributions of those barbéchas who are serving their neighbourhoods.

Step 2a: Service contract with the Municipality or a Private Operator

Once the working relationship is established, direct service contracts or subcontracts between the Barbecha organization and private operators contracted by the municipality are possible. The experience from other integration models shows that this requires simplified tendering process so that Barbecha Organizations can apply. Support to the Barbéchas in the form of trainings, working equipment and advance payment is needed to make this model successful.

The service contracts managed by micro-organizations of previously informal sector workers likely need to be relatively small scale (at least at the beginning) and it is anticipated that a zone-based micro-management is

required for this type of service provision.

Step 2b: Formal cooperation between the Municipality as service provider and the Informal Recyclers Association.

In case the informal recyclers do not enter the service chain but stay in the collection, trading and processing of recyclables, contracts can be much simpler and can consist of merely paying a fee equal to the saved cost of collection and landfilling to those waste pickers who are registered to the Association and adhere to a code of conduct. This model is employed in Bogota, Colombia.

Signing a contract with a municipality, in order to provide remunerated services, is subject to the conditions stipulated by the code of public sector. This demands the creation of enterprises. The informal sector is not yet sufficiently structured and needs assistance to accommodate conditions. The recent provision concerning social enterprises presently restricts the eligibility to those who have graduated from universities.

An alternative to these routes could be the direct employment as part of the city staff. While this seems to be feasible in certain countries for Tunisia, it does not seem attractive since employment is based on an open competition and is not favouring informal sector staff.



4.5. Roles and interests of implementing partners

The three implementing partners agreed to cooperate together in the pilot districts are representatives of:

- The Barbecha Associations
- The Municipalities
- The Neighbourhood Committees/Citizen Associations

The three parties had to make decisions on organizational, technical, logistics and financing aspects. In the following sections, the aims and roles of each party are presented briefly in the way they were described in the three-partite cooperation agreements that stand at the basis of the pilot projects.

4.5.1. Barbéchas

Interests:

- Professional recognition
- Increased earning potential
- Support in terms of storage place or equipment
- Access to credits in order to buy transport equipment and other equipment

Obligations

- a. Take on the responsibility of collecting PET and cans from the households in the pilot zones (through door bell or pick up of recyclables from the front of the house).
- b. Maintain a good relation with the citizens (recognize citizens as customers of a service).

4.5.2. Municipalities

Interests:

- Reduce waste accumulation and littering through a better separation of tasks between the municipal workers and the barbéchas:
- Increase recycling rates and separate waste to be landfilled
- Increase the environmental compliance and cleanliness of the recycling value chain, especially collection points
- Improve recycling rates
- Enhance cooperation with the barbéchas

Obligations:

- a. Provide a physical location and part time staff for the liaison office
- b. Coordinating the activities in the pilot district
- c. Provide a personalized badge to the barbéchas, indicating the pilot district
- d. Coordinate timing of the public service with the informal sector service

4.5.3. Neighbourhood committees:

Interests:

- Increased cleanliness and recycling

Obligations

- a. Contribute to the carrying out the customer satisfaction survey
- b. Contribute to the awareness raising campaign
- c. Contribute to management and monitoring
- d. Participate in regular meeting with the municipal staff and the barbécha Association implementing the project

LESSONS LEARNED

1. Improved user satisfaction, recycling and cleanliness levels.
2. Barbecha and community relations improved through the pilot projects
3. The barbécha have seen potential in improving the productivity of their work; more importantly, they gained a sense of pride in their work.
4. Medium to long term municipal institutional support to the association is needed, specifically in terms of training and coordination.
5. Financial or physical support is needed from the municipality in terms of better transport equipment, storage place etc. to obtain long-term results.
6. Neighbourhood committees have the potential to step up and take over some parts of municipal obligations in terms of monitoring and coordination, and even the support to those barbéchas working in their area.

5. Value chain interventions



Recycling is in part driven by purely material value and in part enhanced through market interventions and economic instruments such as incentives, tax cuts, buy back systems and Extended Producer Responsibility (EPR).



The Government of Tunisia had an active role in structuring and operating the value chain for plastic packaging in Tunisia. Indeed, until the creation of the Eco-Lef system by decree in April 2001, there was no collection of plastic in Tunisia, while the paper/ cardboard, metal and glass were subject to an active and intense informal recycling. Eco-Lef has been the origin of the development of more than 320 Eco-Lef points that allowed the collection of around 16,000 tons a year of plastic packaging wastes. Depending on the type of polymer, 70 to 90% of the collected plastic waste is recycled through more than 100 agreements with recyclers. Eco-Lef has helped to create 18,000 jobs and around thirty micro-enterprises through the mechanism 41 of the National Employment Fund. Furthermore, the system has defined prices for plastic packaging (PET bottles, HDPE bottles, films and LDPE bags, etc.), thereby jump-starting the market for these recyclables.

5.1. The Extended Producer Responsibility (EPR) in Tunisia

The first challenge of Extended Producer Responsibility (EPR) is to implement effectively the polluter-pays and recover-producer principles. In Tunisia, the producers of plastic packaging and the manufacturers of consumer goods are currently exercising this responsibility



collectively through an eco-organization, Eco-Lef, which finances the selective collection and recycling of packaging waste.

However, Eco-Lef does not fully respect the spirit of EPR. Indeed, financing is not based on individual contributions paid by each producer based on their outputs to encourage them to reduce waste through the introduction of eco-design in product and packaging and thus reduce their taxes. On the contrary, Eco-Lef is financed through the so-called Environmental Protection Tax whose base is the sale price of the product and not the cost of collection and treatment of packaging waste. In fact, this tax collection, chosen for obvious reasons of tax efficiency, has no direct link with the « waste generation potential » of products, or with the ability of producers to reduce the environmental cost of the end-user. Thus, this system does not convey any ecological incentives to reward the individual effort of prevention.

5.2. Enhancing recycling through EPR

Therefore, it is strongly recommended to redesign Eco-Lef to make it an operational tool to promote waste prevention, based on three principles:

- 1) Make a direct link between the contribution of each producer and the environmental cost of the products to the end user;

- 2) Provide full cost recovery for packaging waste managed by municipalities;
- 3) Introduce quantifiable objectives for prevention, that is targets for reducing packaging waste by producer per stream.

In practice, developing a comprehensive and genuine ERP policy should be based on the following aspects:

- Identification of participants in the scheme: waste producers, importers, retailers, collectors, recyclers, should be encouraged to be approached first via incentives and in time via taxes in order to collect and recycle all the used products and goods.
- Initiate eco-design: For producers, encourage designing products less «rich» in waste generation and more prone to being recycled through specific incentives such as subsidies and tax credit to research and development expenses, exemptions from VAT, consumption taxes, custom duties on manufacturing equipment and raw materials that reduce waste generation (cleaner production) and taxes for goods and products that generate excessive waste.
- Establish sustainable financing mechanisms for the management of these value chains, through deposit systems linked to quantities and characteristics of waste streams. These mechanisms will be directly managed by the sector. Barbéchas should be part of the system as main suppliers of the recyclable materials.

5.3. Integration through EPR

Barbéchas currently cannot directly access the collection points managed by Eco-Lef – which are open only to holders of commercial license. In consequence, the majority of the barbéchas cannot benefit from the high price guaranteed by Eco-Lef, and are therefore obliged to use intermediaries offering lower prices. ANGED's policy is to gradually withdraw from the operation of collection points and let them be operated privately. Therefore, the real beneficiaries of guaranteed prices are these private operators of collection points



who are free to fix purchase prices downstream with barbéchas.

In order to strengthen the regulatory role of Eco-Lef and modify the current system into an inclusive value chain intervention, it is recommended:

- To allow barbéchas to sell directly to Eco-Lef points. The market will likely react to this measure and middlemen such as collectors and traders will charge limited margins when purchasing from barbéchas.
- To focus intervention on certain recyclables that would be eligible but are currently not collected
- To focus subsidized prices for those plastic types that do not currently have a fully developed market, but are part of the EPR and can be funded from EPR
- To set up a buffer stock to help the sector absorb economic shocks (such as those in 2008-2009 or 2012)
- To foster municipalities to enter into long-term collection contracts with barbéchas. Indeed, barbéchas are unable to resist strong fluctuations in oil prices (and hence the price of plastic resins).

In addition to those recommendations, it is also desirable to strengthen the ability of barbéchas to directly reach markets of the collected plastics. One of the constraints of the recovery of plastic waste is the low productivity of recyclers, due both to their large number (over 400 have a license and much more are informal,

according to data from ANGED) and the limited amounts of collected plastic. Therefore, it is recommended to reduce the number of recyclers, to stop issuing licenses to new recycling companies for plastic packaging waste and potentially re-distribute licenses based on inclusive efficiency criteria.

5.4. Economic instruments for enhanced recycling

Further economic instruments that could promote higher demand for recyclables, thus better earning potential for recyclers:

- Tax incentives:
 - total or partial exemption from customs duties, VAT and/ or consumption duties on the acquisition of tools and machines for production of goods made from recycled raw material
 - total or partial exemption from VAT and/ or consumption taxes on acquisition of the recycled raw material
 - total or partial exemption from VAT and / or consumption taxes on the sale of goods and products made from recycled materials
- Market instrument (other than EPR):
 - Assigning a percentage of public procurement bids to products and goods made from secondary materials;
- Subsidies:
 - Partially supported /capped investment expenditure for the acquisition of tools and machines for production of goods made from recycled raw material; and
 - Grant support of R&D for development and marketing of goods and products made from recycled materials.

LESSONS LEARNED

- Eco-Lef has been a good start to implement plastic waste collection and recycling.
- Eco-Lef needs to be re-designed to become a genuine and effective EPR policy, meaning that individual tax contribution should be calculated in order to promote products with low waste generation. Quantitative objectives for waste reduction should be introduced.
- Inclusive EPR is possible through lowering market barriers for barbéchas, giving them access to guaranteed prices



6. Financing



6.1. Access to micro-financing

Several micro-finance institutions currently operate in Tunisia but few are actually interested in barbéchas financing, mostly due to their lack of understanding of their business and their needs.

Several meetings were held with these financial institutions and a working group has been set up to identify ways to ease access for barbéchas to micro-financing.

The main financial needs of barbéchas are related to the acquisition of improved transportation means and simple baling and processing equipment. Besides this, some of them need a loan for working capital as being able to buy and stock materials is important in the business.

The main barriers identified are the low amount of loans connected to the perceived limited repayment capacity of barbéchas, the cost of borrowing, and above all, the guarantee required by micro-finance institutions. While the BTS does not formally require a guarantee as other financing institutions do, it suffers from a low recovery rate of 60% of the credits. The other institutions require either the guarantee of an employee, a group or an association, or a client of the respective

financing institution or, if possible in case of a standard equipment a pledge on the equipment.

It should be noted that following discussions with the barbéchas, ENDA and Taysir Microfinance institutions have set up specific funding instruments to match the needs and the situation of barbéchas. However, the bank guarantee issue is still not addressed and remains the major obstacle for access to financing.

Moreover, liaison offices in the two pilot municipalities helped facilitate contacts between barbéchas and micro-finance institutions. It is therefore recommended

LESSONS LEARNED

- Increased understanding of the activity of resource recovery and recycling on the part of the micro-finance institutions will enable the creation of suitable financial products for barbéchas
- Financing is needed for transport and equipment for baling, processing and storing
- Financing is needed to support working capital
- Bank guarantees are currently an important barrier to the barbécha's access to micro-financing.



to extend this positive experience to continue staffing these liaison offices as true one-stop bureaus dedicated to barbécha's problems offering, among other services, assistance and training in access to finance and improved business skills.

6.2. Guarantee funds

Contact was made with the Tunisian Guarantee Company (SOTUGAR) to understand the terms of its mission. It appears that SOTUGAR provides bank guarantees to local banks, for loans borrowed by project sponsors who cannot give any external pledge on their assets against the payment of a fee amounting to about 1% of the loan. The claim for this guarantee is made by the lending institution. Any financial institution as defined in the Banking Act is eligible for this mechanism - and thus, in particular, BTS, ENDA and Taysir Microfinance are eligible since the enacting of the new law on micro-financing.

Furthermore, the possibility has been explored that ANGED or municipalities vouch for barbéchas to obtain micro-credit. It turns out that ANGED granted in the past a moral guarantee at the request of BTS to 5 collectors who have contracts with the Agency. However, ANGED does not want to extend this experience, given its lack of capacities. The municipalities of La Marsa and Ettadhamen have argued the possibility for barbéchas to pledge their contracts with micro-finance institutions - the only problem is that barbéchas can only strengthen their technical (transportation) or financial (working capital) capacities only after having signed contract with the municipalities.

Following the discussion held with microfinance institutions and representatives of barbéchas, it transpires that it is possible to address the issue of the guarantee required for all micro financing by two ways:

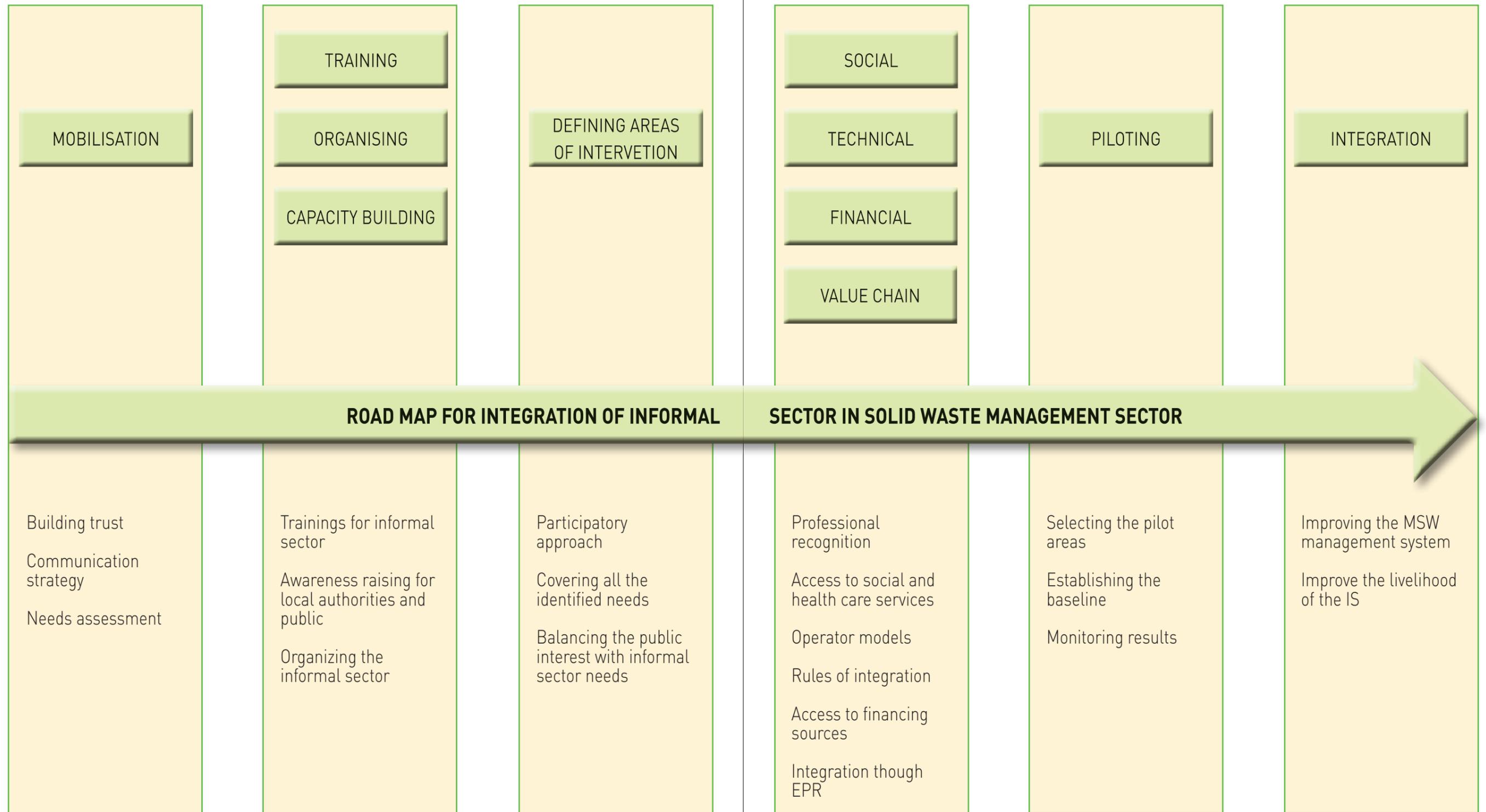
- ask for a SOTUGAR guarantee and have the beneficiaries of the loans support the cost of the guarantee; or
- encourage barbéchas to establish a company or a professional association

LESSONS LEARNED

- The implementation of a bank guarantee supported by either ANGED or municipalities cannot be seriously considered at the current stage
- SOTUGAR could provide a guarantee given the cost of guarantee is covered. A cooperation between micro-financing institutions and SOTUGAR is strongly encouraged.
- The opportunity and workings of the professional associations of barbéchas guaranteeing for its members should be explored.
- Advance payments on service contracts and service contracts with the municipalities could act as guarantees in the medium to long-term future.



7. Road Map for Structural Integration of Informal Sector in Solid Waste Management in Tunisia



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