



## CASES OF MAPPING OUTCOMES

# Implementing Reform Initiatives in Solid Waste Management in Bosnia

In Bijeljina, a city in northeastern Bosnia and Herzegovina, the solid waste management system was not financially stable. Consequently, in the fall of 2011, six representatives from the municipality of Bijeljina, its transport utility and dumpsite utility, embarked on a yearlong program to advance their solid waste management reforms. Their success in forming a coalition that could withstand the demands of implementation allowed them to deal with tough issues, such as citizens not paying fees, lacking the experience to implement solutions and adjusting their work processes in order to deliver results.

During the period of January–March 2013, the World Bank Institute (WBI) mapped the outcomes<sup>1</sup> of the Bijeljina experience using a customized outcome mapping tool<sup>2</sup>. This case is a result of that mapping and examines the results of the Bijeljina reform team efforts, which occurred under WBI's support to South

### Development Objective

Improve the value of municipal services for citizens in South East Europe.

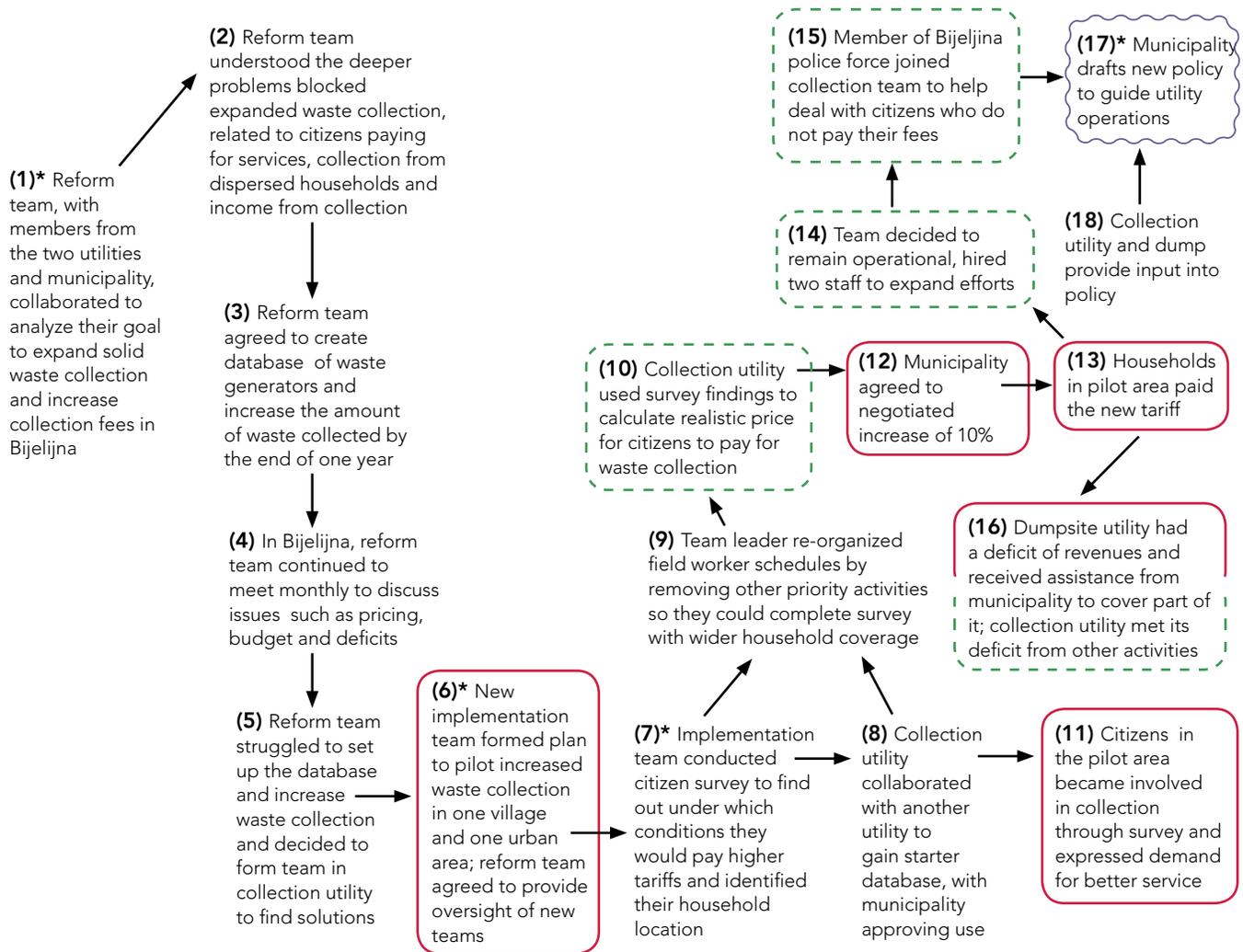
### Problem

The inabilities of municipalities to create and manage financially viable solid waste management systems are due to a variety of political economy, institutional and adaptive challenges. This tension is heightened in a fragile context. In the city of Bijeljina in northeastern Bosnia and Herzegovina, waste collection was no longer a sustainable service. Challenges included citizens not paying fees, dispersed households, weak operations, poor communication and weak financial management.

### Specific Objectives

To strengthen a cadre of reform-minded local, regional and national-level government officials and members of civil society to improve solid waste coverage through collaborative leadership strategies that mobilize stakeholders to make progress on complex adaptive problems.

**Figure 1. Map of outcomes showing how changes connected and built over a two years**



2011	2012
<p><b>Institutional changes</b></p> <ul style="list-style-type: none"> <li>Outcomes related to societal, policy and organizational changes</li> <li>— Political commitment, social norms and citizen demand for service improvements</li> <li>~ Policy improvement for utilities</li> <li>- - - Operational efficiency/responsiveness/financial viability of utility</li> </ul>	<p><b>Learning/capacity changes</b></p> <ul style="list-style-type: none"> <li>Other outcomes related to awareness, knowledge or skills, collaborative action, or the use of knowledge or innovative solutions.</li> <li>* Outcomes selected for substantiation; see page 6 sidebar.</li> </ul>

East European (SEE) countries working on solid waste management reforms.

A visual map (figure 1) presents the sequence of outcomes achieved by the change agents—municipal leaders, reform team members and an implementation team involved in the process. The map illustrates how outcomes connected and built on each other over time to form multi-actor, institutional processes for change to address the Bijeljina reform team’s objectives and goal.

Through the outcome mapping process WBI identified and formulated the outcomes, presenting an explanation of their significance and how WBI had contributed—directly or indirectly, in a small or big way, intentionally or not—by empowering the change agents to take new actions. Then, roughly 20% of the outcomes were independently substantiated for credibility in the mapping exercise (see page 6 sidebar).

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## BACKGROUND

The inability of municipalities to create and manage financially viable solid waste management systems is due to a variety of political economy, institutional and adaptive challenges. Often citizens and the state need to adapt how they engage with each other. This tension is heightened in a fragile country context where dysfunctional public service, resettled households and citizen behaviors are exasperated by years of conflict.

In the fall of 2011, WBI's Leadership Practice launched a yearlong Greater than Leadership (GTL) Program to help participating teams improve municipal services. The program began with an application process where teams submitted their reform proposals. This was followed by a five-day workshop with six municipal-level reform teams from Albania, Bosnia and Herzegovina, Kosovo, Macedonia, Montenegro and Serbia. During the workshop the teams were exposed to adaptive leadership, strategic communication, political economy and self-mastery concepts. They were also facilitated in conducting network/influence analysis on their reforms as well as identifying their own goals, work plans and potential Rapid Results Initiatives (RRI). An 11-month laboratory phase followed, during which time the teams innovated around how to implement their newly articulated goals.

The objective of the GTL program is to strengthen a cadre of reform-minded local, regional and national-level government officials and members of civil society to improve solid waste coverage through collaborative leadership strategies that mobilize stakeholders to make progress on complex adaptive problems. Beyond the concepts and tools that are shared, teams benefit from knowledge exchange amongst themselves as well as best practices and advice from technical experts.

The GTL Program built on the World Bank-Austria Urban Partnership Program on Strengthening Capacity Building of Local Governments in SEE countries. Through this program, WBI's Leadership practice was able to partner with the World Bank operational team in the region and WBI's Urban team to offer the GTL Program. This current case focuses on the experience of one of these reform teams as they coalesced and worked toward overcoming the challenges they faced during their 11-month laboratory phase.

## OUTCOME AREAS

Figure 1 shows the outcomes of the Bijeljina reform team's efforts to reach their 11-month goal to create

*a database on waste generators in the municipality of Bijeljina by July 31, 2012 and to increase the amount of waste collected by 20% in Bijeljina by Dec 31, 2012.* The process of change they pursued can be seen in the four streams of outcomes (Figure 2) that are detailed in the following sections.

### Outcome Area 1: Municipal Commitment to Expand Collection Coverage

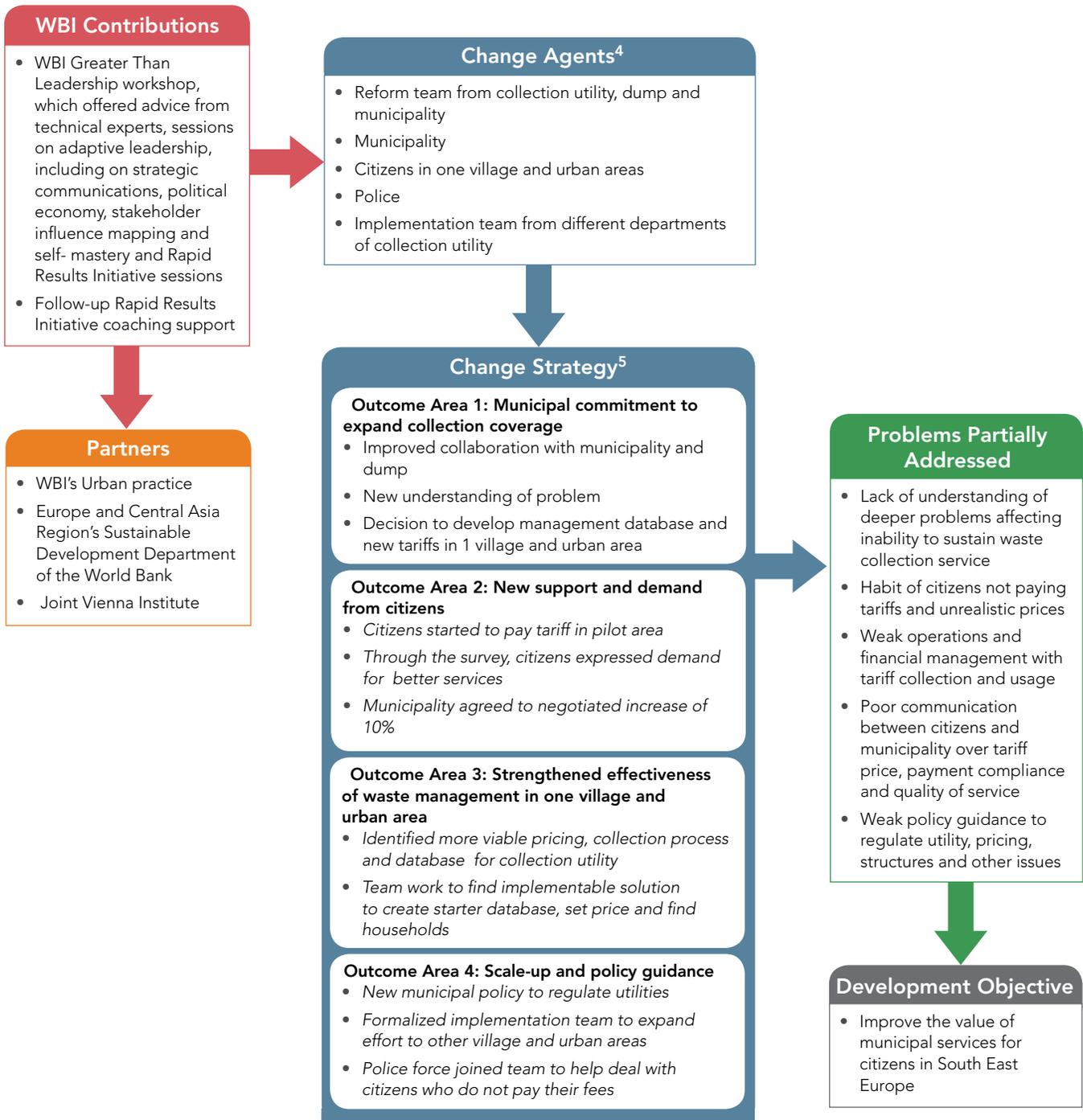
In the municipality of Bijeljina, six senior officials from the municipality, collection utility and dump utility formed an informal coalition or reform team to make progress on improving solid waste management services, in particular coverage of the services in the town and surrounding rural area. In December 2011, during the GTL workshop application process, the reform team collaborated to analyze the problem of having insufficient funds to sustain the municipalities' solid waste collection and dumpsite services. The team set a reform goal to expand solid waste collection and increase service fees collected from households over 11 months. [1]<sup>3</sup>

This new alignment triggered a collaborative process among the reform team members. Eventually it enabled the team to work together to start to break down the difficult medium-term reform of improving the sustainability of municipal services into workable pieces that could be more reasonably addressed within one year.

In January 2012, at the GTL workshop, the reform team further refined their goal and the constraints to reach it. They understood that expanding solid waste collection and increasing service fees was not a simple technical exercise and particular institutional constraints needed to be addressed. [2] These constraints included the weak financial sustainability of the utilities' services, operational efficiencies in delivering the services, poor citizen engagement and inefficient regulations. For example:

- The collection and dump utilities were running their services on a deficit. To become profitable the collection utility needed to collect the "correct" fees from all households so they could then pay a fair price for dumping waste at the dumpsite.
- Both utilities lacked accurate data on the location and number of households they collected waste from. This inaccuracy was due to disrupted land-use post conflict, with disorganized and undocumented construction of homes. Households no longer aligned to pre-war boundaries, making it difficult

**Figure 2. Change strategy showing how change happened to advance progress toward goal**



- to collect waste from households with no responsible payer, no road access and multiple families combined together in close land areas.
- Citizens no longer had the habit of paying for waste collection services since the war and did not leverage channels to demand improvements in the services.
  - The municipality needed to strengthen its policy framework for governing public utility services, including the provision of a guide for information-sharing among utilities and the setting of fee rates and developing processes to enforce compliance with rules and regulation.

The reform team agreed to address these root problems by focusing on creating a database of household waste generators in the municipality as well as increasing the amount of waste collected by the end of the year by 20%. [3] Previously there was no consensus among the municipality, collection utility and dump utility around the problem or how to focus reform efforts. Starting in January 2012, the reform team met monthly to discuss problems such as pricing and budget deficits and possible solutions to implement their goal. [4] The team had developed a common sense of urgency to continue working together to implement the goal.

**WBI provided** technical support to applicants before the GTL workshop in January 2012 to help them re-think the nature of their problem, goal and stakeholders. During the GTL workshop, WBI provided technical expertise and learning on adaptive leadership, personal mastery, coalition-building diagnostics, strategic communication and Rapid Results Approach.

In February 2012, the reform team recognized they were struggling to create their database and increase waste collection. To find solutions to this obstacle they decided to set up a second team within the collection utility who would become a RRI “implementation team.” [5] Six staff members from different job areas were assigned to the team because they had to do the work of designing and verifying a database as well as increasing the coverage area for collection of waste in Bijeljina. Together they developed a results-based goal and detailed work plan to increase coverage while setting up and verifying a database in one rural area and one heavily congested urban street in Bijeljina. The reform team agreed to provide oversight to the

effort. [6] Meanwhile, the implementation team tested out solutions they could later scale-up across the municipality.

**WBI invited** teams in the GTL workshop to submit applications for Rapid Results coaching support during the laboratory phase when teams implement their reform goal in their respective municipalities. The RRI support was targeted at teams that needed to find new solutions to implement their goal. By request of the Bijeljina Reform Team, WBI provided a Rapid Results coach to support the implementation team over the approximately 65 days they had to unblock the implementation obstacles facing the reform team’s achievement of their 11-month goal. WBI encouraged the reform team to oversee the RRI process so that lessons from the RRI could be institutionalized with full support of the municipality, collection and dumpsite utilities.

## **Outcome Area 2: New Support and Demand from Citizens**

Between April and June 2012, the Bijeljina implementation team carried out a citizen survey in the pilot area. They planned to use the field-based survey to inform the location of households to develop the database and find out under which conditions citizens would pay higher fees for waste collection services. Close to half of the citizens surveyed were willing to pay more for waste collection services but at small increments. A little over 25% thought the current price was too high and almost half found the cost to be realistic. But, only half of the citizens surveyed were happy with current service provision provided by the collection utility. [7]

Through the survey, citizens became involved in scrutinizing the utility’s services and expressed their demand for better services. [11] This was important to change citizens’ behaviors in terms of social norms around paying for services and to engage citizens in voicing their demands for services improvements. The increasing citizen demands also provided a political incentive for elected officials in the municipality to support efforts to increase collections and solid waste coverage.

In July 2012, the Bijeljina municipality agreed to a negotiated collection price increase of 10% for waste collection services, which fell within citizens’ willingness to pay. [12] In the second half of 2012, households in the pilot area of the Bijeljina municipality paid the new tariff. [13] The municipality’s agreement to the

## SUBSTANTIATION OF OUTCOMES

To verify the accuracy of the outcomes mapped and enrich WBI's understanding of them, the external consultant selected 4 outcomes [1, 6, 7, 17] and asked 7 people independent of WBI but knowledgeable about the change to review each and record whether they agree with the outcome as described. Five people responded: 5 fully agreed with the outcome description as formulated and WBI's contribution to it; regarding significance, 1 fully agreed with the description and 4 provided additional information to describe the significance. Excerpts of the substantiators' comments on the outcomes achieved:

"The reform team from Bosnia and Herzegovina comprised 6 members: 1 member from the municipality of Bijeljina (today the city of Bijeljina), 3 members from the public enterprise regional landfill EKO-DEP, 1 member from the utility Komunolac and 1 member from the directorate for construction and development of the city of Bijeljina."  
—*Dragan Lazic, Eko Dep, Bijeljina*

"The agreement, the plan and key steps have been achieved [toward the goal of increasing the amount of waste collection]. However, the coverage has not yet been increased by 20% under the specified deadline."  
—*Milorad Zekic, Head, Komunolac utility*

"Today, the main goal—to cover the whole municipality with waste collection—is almost done. The 11-month goal to increase coverage for 20% failed because the goal was too complicated for so small a time period. But, the Rapid Results Initiative [implementation and achievement of certain outcomes in a shorter time period] made good preparation for the long-term goal. WBI had a huge impact on the creation of the reform team and made our work much easier and more organized."  
—*Bojan Miric, Komunolac utility staff, Rapid Results Initiative team leader*

price increase showed new trust in the collection utility's methodology.

**WBI contributed** RRI coaching support to help the implementation team tackle the issue of engaging citizens and the municipality. The team did the work on the ground, having been empowered through the Rapid Results process.

### **Outcome Area 3: Strengthened Effectiveness of Waste Management in One Village and Urban Area**

From April to June 2012, the leader of the implementation team in the Bijeljina collection utility reorganized the field workers' schedules so they could give priority attention to the reform goal. This cleared their workload so that they could complete surveying citizens and the work plan to create the database and increase waste collection in one rural and one urban area of Bijeljina. [9] This outcome shows how the authorizing environment in the collection utility changed to allow the implementation team to efficiently operate and adapt processes to address the reform goal, which was previously a low priority.

**WBI provided** advisory support to the team leader during the RRI and at the mid-point review.

In May 2012, the collection utility collaborated with another utility to obtain a starter household database, with the Bijeljina municipality approving the terms of use. [8] The collaboration was unprecedented and helped the implementation team solve the problem of having no household database to base its collection activities. It also increased support from the municipality, since the municipality had to approve the use of the database. The citizen survey could then help to validate and build on information in the database.

In June 2012, the Bijeljina municipality and collection utility used data from the citizen survey to calculate a price for waste collection that reflected the costs incurred by the utility. This new price included the higher cost for dumpsite fees. [10] A realistic price is a critical step toward a financially viable solid waste management system. Price identification is tricky because the price must cover the costs of collecting and dumping the waste. For the price not to be inflated, both the collection utility and dump utility must work efficiently. Previously, the utilities did not have a transparent method to calculate pricing or a

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procedure to communicate the pricing process to the community.

In December 2012, the Bijeljina municipality agreed to cover 20% of the dumpsite utility's deficit of 43% of total revenues, thus reducing the deficit to 35%. The collection utility covered their deficit by using income from other activities, such as street cleaning. [16] This demonstrated a step to move to a more sustainable business model and improve financial viability of the utilities. It also showed the new political will of the municipality to subsidize the dump utility's operations.

**WBI facilitated** the GTL workshop and RRI coaching to empower a process for the municipality and utilities to address the challenge of pricing on their own. WBI helped the municipality understand the revenue challenge related to solid waste management.

#### **Outcome Area 4: Scale-up and Policy Guidance**

In 2012, the Bijeljina implementation team decided to remain operational to continue to scale-up coverage beyond the pilot area. [14] By keeping the implementation team operational, the problem-solving process and reform solutions to improve solid waste management are becoming institutionalized. The implementation team expanded to include a member of the Bijeljina police force to help the utility manage compliance challenges of households paying their fees. [15] This engagement shows that the collection utility has a clear mandate and strong support from the municipality to scale-up waste management service reforms beyond the pilot.

In January 2013, the Bijeljina municipality drafted a new policy to guide utility operations, to which the collection utility and dump utility provided input. [17, 18] These outcomes provided guidance that previously was absent and which was necessary to regulate utilities and scale-up reforms to make sure they provide the required value to citizens. They also demonstrated the new collaboration between the municipality and utilities.

**WBI contributed** RRI coaching to reinforce the idea that representatives from other agencies or groups outside the municipality and utility could join the implementation team.

#### **CONCLUSION**

The outcomes achieved in Bijeljina describe the experience of one reform team that joined the GTL program. Over one year, the Bijeljina reform team

became an informal coalition that raised the urgency and political commitment to improve solid waste management services in the municipality. They improved communication and relations among two utilities and the municipality, providing an authorizing environment to carry out difficult reform activities.

The Bijeljina reform and implementation teams uniquely adapted solutions to address institutional changes that previously blocked improvements in solid waste management services and produced outcomes they could build on. This illustrates a municipal-led process by which local teams identified "how" to advance their own reforms.

For example, they leveraged a simple citizen survey to address social norms around paying fees for services and the lack of a way to channel citizen demands for service improvements. They addressed operational inefficiencies in the utilities by re-organizing staff to implement reform activities, identifying household locations so service fees could be collected and creating a database for collection activities. Financial viability was addressed by developing a transparent process to calculate service fees and secure subsidy support from the municipality to account for the remaining deficit. The municipality addressed policy inefficiencies, drawing on lessons from the pilot to inform new regulations to guide utilities' services and solid waste management.

#### **NEXT STEPS**

The new regulations put in place by the municipality should help to ensure continued improvements in solid waste management services in the municipality. Implementation and monitoring of the regulation by the municipality will be important, along with continued logistical support to utilities to carry them out.

The continuity of the reform and implementation teams beyond the one-year pilot period points to an ongoing effort to scale-up the outcomes achieved in the pilot throughout all town and rural areas of the municipality.

As the reform team members look to the future their concerns will move to the next stages of improving solid waste management services, such as recycling and monitoring the current solid waste management system. While the existing solid waste management system established in Bijeljina is expected to improve over time, it is realistic to expect new liabilities for improvement of the entire system to appear. ■

## NOTES

<sup>1</sup> Mapping outcomes—and related outputs and milestones—can help us learn from change processes that occur during program delivery that often seem complex and opaque because they involve multiple actors and address large development problems. An outcome is what each social actor (or change agent) did, or is doing, that reflects a significant change in their behavior, relationships, activities, actions, policies or practice. The program may influence these changes, directly or indirectly, partially or wholly, intended or not. Outcomes are identified at two levels in relation to the goal: institutional changes relate to societal, policy and organizational changes; and learning/capacity changes relate to awareness, knowledge or skills, collaborative action, or the use of knowledge or innovative solutions. These levels are based on the Capacity Development and Results Framework. The framework provides a systematic yet flexible approach to designing capacity development strategies and programs, monitoring and adaptively managing interventions, and evaluating and learning from their results.

<sup>2</sup> Outcome harvesting is a practical assessment tool from the outcome mapping community of practice. It can be used for real-time monitoring and evidence gathering from complex development processes that involve multiple stakeholders. It is based on a similar concept of locally driven change from the Capacity Development and Results Framework. The tool was customized to gather information on outcomes—and related outputs and milestones—to learn from what changed, for whom, when and where, the significance of the change and how the program contributed to each change.

<sup>3</sup> The numbers in brackets correspond to the outcomes in Figure 1. The text that usually follows each outcome refers to its significance. The process of change the outcomes represent can be seen in Figure 2.

<sup>4</sup> Change agents are leaders, groups or organizations from government or non-state that drive change.

<sup>5</sup> Change strategy refers to how change happened to advance progress toward the development objectives—the development problems addressed, types of outcomes achieved, WBI contributions, and partners involved. A change strategy may include different types of change processes or outcome areas depending on the complexity of the multi-actor institutional changes involved in a program.

## FOR MORE INFORMATION

### Project Contacts

Manuel Contreras, WBI Leadership team, [mcontreras@worldbank.org](mailto:mcontreras@worldbank.org)

### Email

WBI Capacity Development and Results team, [capacity4change@worldbank.org](mailto:capacity4change@worldbank.org)

### Website

[www.worldbank.org/capacity](http://www.worldbank.org/capacity)

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WBI's Capacity Development and Results team led the outcome mapping exercise; Jenny Gold coordinated with support from Ricardo Wilson-Grau. Sharon Fisher provided editorial and design services. Samuel Otoo provided overall guidance.

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