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# **A Review of Local Tax Policy to Expand Water & Sanitation Access**

**PREPARED FOR WATERAID MADAGASCAR & WATERAID AMERICA**

**Final Report  
May 2009**

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All errors that remain are our own.

# Abbreviations

<b>ANDEA</b>	The National Water and Sanitation Board
<b>CSB</b>	Basic Health Centers ( <i>Centres de Santé de Base</i> ) as in : CSB Subsidy
<b>DAA</b>	District Administrative Officer ( <i>Délégué Administratif d'Arrondissement</i> )
<b>DEPA</b>	Directorate of Water and Sanitation
<b>DGI</b>	Directorate General of Taxes ( <i>Direction Générale des Impôts</i> )
<b>EDF</b>	European Development Fund
<b>EPP</b>	Public Primary Schools ( <i>Ecoles Primaires Publiques</i> ) as in : EPP Subsidy
<b>FDI</b>	Foreign Direct Investment ( <i>Investissement Direct Etranger</i> )
<b>FDL</b>	Local Development Fund ( <i>Fond de Développement Local</i> )
<b>FIBTAMA</b>	Fikambanan'ny Ben'ny Tanana Manodidina an'Antananarivo (municipal association)
<b>FNEA</b>	National Water Resources Fund
<b>GDP</b>	Gross Domestic Product
<b>HDR</b>	Human Development Report
<b>IMF</b>	International Monetary Fund
<b>IWRM</b>	Integrated Water Resource Management
<b>JIRAMA</b>	Jiro Sy Rano Malagasy
<b>MAP</b>	Madagascar Action Plan
<b>MDG</b>	Millennium Development Goal
<b>NGO</b>	Non-governmental Organization
<b>NSDS</b>	National Strategy for the Development of Statistics

<b>PN2D</b>	National Program for Decentralization and Deconcentration
<b>SADC</b>	South African Development Community
<b>SAGS</b>	Sanitation Engineering Service
<b>SAMVA</b>	Autonomous Maintenance Service of the City of Antananarivo (Service Autonome de Maintenance de la Ville d'Antananarivo)
<b>SIPA</b>	School of International and Public Affairs (Columbia University)
<b>SOREA</b>	Water and Sanitation Regulatory Agency ( <i>Société de Régulation de l'Eau et de l'Assainissement</i> )
<b>SWOT</b>	Strengths, Weaknesses, Opportunities, and Threats
<b>UN</b>	United Nations
<b>UNDP</b>	United Nations Development Programme
<b>VAT</b>	Value Added Tax
<b>WASH</b>	Water Sanitation and Hygiene Program

# Executive Summary

Achieving universal access to potable water and full coverage of sanitation services are among Madagascar's highest development priorities, and one of the main challenges the country faces. It is estimated that only 45% of people in Madagascar have access to safe drinking water, and only 33% have access to adequate sanitation.

In Madagascar, the collection of taxes and delivery of public services is highly decentralized. Water and sanitation are among the services to be provided on the local, or commune, level but communes often struggle to cover the operation and maintenance costs of these basic services. Therefore, increasing the recovery of locally generated tax revenue is one way in which communes may become better positioned to invest in and maintain water and sanitation services. As such, it is imperative that communes optimize their capacity to generate tax revenue in order to support services.

WaterAid Madagascar works with partner organizations to support communities in the establishment, operation, and maintenance of local water and sanitation facilities using locally-appropriate technologies. WaterAid also works to assist communes in building capacity to enable improved infrastructure and delivery of water and sanitation services. To this end, WaterAid would like to be better informed about the local structures and processes involved with tax collection at the commune level in order to ascertain how revenues can be increased.

A six-member team from Columbia University's School of International and Public Affairs (SIPA) reviewed the current tax systems in two communes: Vavatenina, a rural commune near the country's eastern coast, and Ankadikely Ilafy, a peri-urban commune outside of Antananarivo. In these communes the team conducted interviews with local government personnel and water service providers to assess local taxation frameworks, the communes' capacity for tax collection, and the allocation of tax revenue. The team also contracted local agents to conduct focus group interviews to assess local opinions and understanding of the taxation process.

The SIPA team found that several existing taxes held the potential to generate significant revenue for both the communes of Vavatenina and Ankadikely Ilafy. The team also found that

while most people had a general understanding of how and why taxes were paid, they were often dissatisfied with the results or were unable to see any direct link between the taxes they paid and the development of the commune. Many people expressed a desire for increased transparency in government spending and use of tax revenue.

Based on these findings, the team has made and prioritized recommendations for increasing local fiscal and nonfiscal revenue and improving the water and sanitation systems in both of the communes of study.

To Vavatenina the team's highest priority recommendations are to increase tax recovery by strategically timing collection to coincide with the harvest season. To further increase recovery, the commune should enhance inter-organizational coordination and continue to utilize decentralized field agents to conduct collection. In order to raise awareness on the benefits of paying taxes the commune should hold annual town hall meetings and raise public awareness of the use of tax revenue. The water and sanitation sector should be improved through the rehabilitation of the water system, increased capital investment and the implementation of a new water management strategy.

To Ankadikely Ilafy the team's highest priority recommendations are to investigate methods to increase the recovery of the low-level income tax, as it holds great revenue potential. The commune should also take necessary measures to better predict public revenue and increase transparency in public finance management by holding annual tax forums and publicizing projects financed with tax revenue. With regards to improving water and sanitation services, the commune should enforce the current JIRAMA-commune agreement, impose a constant price for water, and reduce connection costs.

The team recognizes that political will is necessary for these recommendations to be viable. And, it is evident that there is great potential for communes to increase tax revenues, which can then be invested in the development of the communes and ensure the improvement of public services such as water and sanitation.



# Objectives of the Study

The SIPA team was engaged to analyze and make concrete recommendations for improvements in the local tax schemes in Madagascar in order to support universal access to potable water and sanitation. The project involved:

- (1) Undertaking a review of different local financing mechanisms, including cross-subsidies, in Madagascar and a sample of other countries;
- (2) Analyzing the reforms that have affected local taxation in Madagascar, including any changes currently proposed in national legislation;
- (3) Analyzing the local management capacity for tax collection and related needs for capacity building; and
- (4) Making concrete recommendations for improving the local taxation schemes in two of the communes of intervention, including suggestions for implementation and advocacy activities.

## I. Background

### Client Agency

#### WaterAid

WaterAid, a leading international development non-governmental organization (NGO), is working to overcome poverty through increasing access to safe water and effective sanitation for the world's poorest people. WaterAid works in partnership with communities, helping them to identify and maintain practical and sustainable solutions to their water and sanitation needs.<sup>1</sup> WaterAid's projects greatly improve the public health of communities, and have far-reaching impacts on poverty reduction and access to education. The lives of women and children are particularly improved by the work of WaterAid. WaterAid works in 17 countries in Africa and Asia, providing simple, low cost, and sustainable solutions. WaterAid was established in 1981 as a charitable trust in the United Kingdom (UK), where it continues to be headquartered today.<sup>2</sup>

#### WaterAid America

WaterAid America was formed in 2004 and works in close partnership with WaterAid UK. WaterAid America is an independent, U.S. tax-exempt 501(c)(3) organization, based in New York City, which shares and supports the global mission and vision of WaterAid. WaterAid America mobilizes financial and other resources in the U.S. to support the work of WaterAid's country program offices. WaterAid America also undertakes research, outreach, and public education activities throughout the U.S. to raise awareness about the global water and sanitation crisis.<sup>3</sup>

#### WaterAid Madagascar

WaterAid opened an office in the capital city Antananarivo and was officially registered as an international NGO in Madagascar in 1999. Since 1999, WaterAid's work has been quickly

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<sup>1</sup> WaterAid. "Mission and Vision,"

[http://www.wateraid.org/international/about\\_us/vision\\_and\\_mission/default.asp](http://www.wateraid.org/international/about_us/vision_and_mission/default.asp)

<sup>2</sup> WaterAid. "History." [http://www.wateraid.org/international/about\\_us/history/default.asp](http://www.wateraid.org/international/about_us/history/default.asp)

<sup>3</sup> WaterAid America. "What We Do," [http://www.wateraidamerica.org/what\\_we\\_do/default.aspx](http://www.wateraidamerica.org/what_we_do/default.aspx)

developing to address the water and sanitation needs of the people of Madagascar. The country office now supports nine main partner organizations that work with communities in creating, operating and maintaining their own water and sanitation facilities using low cost and locally appropriate technologies.<sup>4</sup> They also raise awareness about good hygiene practices so as to maximize the health benefits of water and sanitation projects. WaterAid Madagascar has been instrumental in:

- Working with the national government and different organizations towards the establishment and implementation of a sanitation strategy;
- Working with its partner organizations in Toamasina to replicate innovative urban sanitation projects;
- Helping three of the four largest water supply NGOs in Madagascar to integrate hygiene and sanitation with safe water initiatives;
- Driving the international Water and Sanitation Hygiene (WASH) initiative in Madagascar which brings together the efforts of different organizations to work effectively in partnership.<sup>5</sup>

One area WaterAid Madagascar is interested in developing further is their ability to advocate for appropriate tax policy to increase access to water and sanitation.

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<sup>4</sup> WaterAid. “Examples of Our Work in Madagascar,” [http://www.wateraid.org/international/what\\_we\\_do/where\\_we\\_work/madagascar/examples\\_of\\_our\\_work\\_in\\_madagascar/default.asp](http://www.wateraid.org/international/what_we_do/where_we_work/madagascar/examples_of_our_work_in_madagascar/default.asp)

<sup>5</sup> WaterAid. “Madagascar: Achievements to Date,” [http://www.wateraid.org/international/what\\_we\\_do/where\\_we\\_work/madagascar/](http://www.wateraid.org/international/what_we_do/where_we_work/madagascar/)

## Country Overview

Madagascar is situated off the south east coast of the African mainland- approximately 400 kilometers from Mozambique. With an area of 587,041 kms, Madagascar is the world's fourth largest island. The Malagasy population is made up of 18 different ethnic groups who speak varying dialects of the official language, Malagasy.<sup>6</sup> Since Madagascar is a former colony of France, French is also widely spoken. Of its 19.7 million inhabitants, 71% live below the poverty line. In 2005, Madagascar ranked 143 out of 173 countries on the United Nations Development Programme's (UNDP) Human Development Index.

## Water and Sanitation

Rainfall in Madagascar varies from 300 mm/year in the South to more than 3000 mm/year in the East Coast. Rains are concentrated in 4 months of the year. Availability of renewable water resources is high, around 20,000 cubic meters/habitant/year<sup>7</sup>. One third of this renewable water comes from groundwater. However, storage capacity at the national level is very low, only 25 cubic meters per habitant, (storage capacity is 2,000 cubic meters in the U.S.), leaving little room for a dry season buffer. Only 4.4 % of the average renewable water resources are withdrawn for human use, and 98% is used in the agricultural sector, primarily for subsistence farming.

Coverage indicators for water supply and sanitation show that access is low, and varies greatly in urban and rural areas. According to WaterAid, in 2005, an average of 45% of the population had access to safe drinking water and 33% had access to adequate sanitation. Access to water in urban areas was 66%, and access to sanitation was 27%. In contrast, access to water in rural areas was 14% and access to sanitation was only 7.5%. The 2006 Human Development Report (HDR) found the same coverage data.

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<sup>6</sup> WaterAid, "Country Information: Madagascar," [http://www.wateraid.org/international/what\\_we\\_do/where\\_we\\_work/madagascar/](http://www.wateraid.org/international/what_we_do/where_we_work/madagascar/)

<sup>7</sup> African Development Bank, "Madagascar: Rural Drinking Water Supply and Sanitation Programme: Appraisal Report," Nov. 2005.

## Water Institutions

The Water Code is the main regulation dealing with the water resource management and the water and sanitation services sector. Validated in 2005, the Water Code establishes the basic principles of water resources management. The Water Code primarily defines the conditions for the liberalization and decentralization of the water and sanitation sector. It establishes the five following principles and institutions:

- 1) Water resources belong to the State but each community shall protect the resource in its area of competence. Communes should act as delegated works supervision agencies for drinking water and sanitation delivery services.
- 2) Access to water is not free.
- 3) The National Water and Sanitation Board (ANDEA) is responsible for the integrated management of water resources at a national level.
- 4) The national regulator of the public drinking water supply is established (SOREA)
- 5) A National Water Resources Fund (FNEA) has been set up to subsidize the most disadvantaged water users.

In years past, the Ministry of Mines and Energy defined, executed and directed sanitation policy through its Directorate of Water and Sanitation (DEPA)<sup>8</sup>. In July of 2008, a new Ministry of Water was created (Decree n°2008-766 of 25 July 2008) This Ministry assumed the role that had been previously carried out by the Ministry of Mines and Energy in regards to the water and sanitation sectors. The role formally assigned to DEPA was transferred to a Direction for Operations within the new Water Ministry.

The National Water and Sanitation Board is the institution responsible for water supply and sanitation in Madagascar. This institution is a public administrative establishment which has legal personality and financial autonomy. It is under the technical and administrative direction

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<sup>8</sup> African Development Bank, Nov. 2005.

of the Prime Minister and is financially responsible to the Ministry in charge of the Economy and Finance.<sup>9</sup> This institution is in charge of:

- 1) Setting priorities for access to water and defining the national standards.
- 2) Defining national strategies for Integrated Water Resource Management.
- 3) Assessing current and future needs.
- 4) Developing a geographic information system.
- 5) Developing and protecting water infrastructure in collaboration with other concerned institutions.
- 6) Programming the necessary master plans for management of water resources and sanitation.<sup>10</sup>

The regulation agency (SOREA) is meant to apply the water and sanitation rates in accordance with the tariff provisions defined in the Water Code. It is also meant to oversee the compliance with water quality standards and propose specific standards for different systems. However, although SOREA was established under the Water Code, it is not yet operational.

JIRAMA (Jiro Sy Rano Malagasy) is the public water and electricity utility operating in 67 urban centers. The African Development Bank reports that this company experienced serious management problems due to low applied water tariffs that do not cover running costs. The company had US\$27 million in debt in 2005, which was later covered by international donors.<sup>11</sup> Investments have been low in the last few years and the deterioration of the supply systems has increased the operating costs. A recent study conducted by JIRAMA shows that it would be necessary to increase the rates by 140% to maintain a financial balance, but that this tariff would be unbearable for customers. The government entrusted JIRAMA's management to an international consultant in 2005 and in 2006 and 2007 the World Bank and the French Development Agency injected \$20 million in the company to restore its financial balance.

The communes are responsible for water management and provision in areas where JIRAMA does not operate. There, water services are delivered through the municipality with the

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<sup>9</sup> African Development Information Services. "Government of Madagascar," <http://www.afdevinfo.com/htmlreports/ma11.html>

<sup>10</sup> African Development Bank, Nov. 2005.

<sup>11</sup> African Development Bank, Nov. 2005. Swisspeace "FAST update. Madagascar. Semi Annual Risk Assessment" December 2005-May 2006.

collaboration of water user associations. Revenues from water sales go to the operation and maintenance of the water systems, but most of these communes lack sufficient staff and capacity to operate the systems properly.<sup>12</sup> In addition, private investment is predominantly limited to urban centers.

The Ministry of Territorial Development has jurisdiction over the municipal sanitation facilities through the City Master Plans and the Sanitation Engineering Service (SAGS). Before the establishment of ANDEA, projects' management was delegated to consultancy firms which also carried out the supervision. The Ministry of Health and the Ministry of Industry also have responsibilities in this sector. The low coverage of access to adequate sanitation is often attributed to: 1) Insufficient human resources at the national and decentralized government levels, lack of public sector capacity at the communal level; 2) Low capacity for associating long term planning with large budgets; 3) Low capacity development due to slow adsorption; and 4) Weak monitoring system and link with international standard criteria.<sup>13</sup>

A joint report by the Government of Madagascar, different NGOs, and UN agencies stated that the lack of adequate sanitation and incidence of waterborne diseases was provoking the loss of 3.5 million school days per year.<sup>14</sup> The quantification of this gap equals 300 times the current public expenditure on sanitation. In 2003, the WASH program was launched by the Ministry of Mines and Energy. This program aims to bring all the water and sanitation stakeholders into collective action to: 1) Target a behavioral change in the population regarding hygiene; 2) Raise awareness of the importance of sanitation and its relationship with health and poverty (to increase the demand for sanitation); and 3) Pursue the integration of sanitation and hygiene as fundamental parts of drinking water supply projects.<sup>15</sup>

## Decentralization

As stated above, the public sector in Madagascar plays an important role in the provision of water and sanitation. In this context, the process of decentralization becomes central to the water and sanitation sector as well. Decentralization in Madagascar has directly affected the

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<sup>12</sup> WaterAid, "Madagascar: National Water Sector Assessment," 2005.

<sup>13</sup> African Development Bank, Nov. 2005.

<sup>14</sup> Diorano-Wash, "Assainissement le défi" 2002.

<sup>15</sup> African Development Bank, Nov. 2005.

country's public revenue system, and helps to explain the fiscal challenges faced by public companies and institutions. Decentralization is the “transfer of authority and responsibility from the central government to subordinate or quasi-independent government organizations or the private sector.”<sup>16</sup> Decentralization can generally take three forms; administrative, political or fiscal.

Madagascar established both administrative and fiscal decentralization in 1995. As a result, the country's fiscal structure and tax system are closely related to the administrative decentralization. However, despite years of decentralization processes, the country remains highly centralized in both administrative and fiscal terms.<sup>17</sup> Furthermore, the collection of government tax revenue has traditionally been highly centralized and the revenue itself comprised a marginal amount of the country's GDP. For example, in 2001, 97% of Madagascar's total tax revenues were collected by the central government and this tax revenue comprised only 9.6 % of Gross Domestic Product (GDP).<sup>18</sup> According to 2006 estimates, government tax revenue was 10.7% of GDP.

Decentralization in Madagascar originally created 6 levels of government; central, provincial, regional, district, commune and fokontany (villages or neighborhoods). In 2002, however, the Constitution was amended and provinces were removed as a regional division. Article 138 of the 2007 amended Constitution stated that decentralized territories were regions and communes. Communes are the most viable and institutionally advanced level of decentralized government in Madagascar. Madagascar now has 22 regions, 117 districts, 1,549 communes, and 17,442 fokontany.<sup>19</sup> The majority of communes in Madagascar are classified as rural.

The strength of fiscal decentralization can be assessed through the use of several analytical tools and there are several indicators that can be used to monitor and evaluate a decentralization scheme. Some of the indicators that can be explored include:<sup>20</sup>

**1. Sub-national tax recovery** reflects both the commune's tax collection ability as well as communities' willingness to pay. This indicator also reflects the level of confidence that

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<sup>16</sup> World Bank, *Decentralization in Madagascar*. World Bank: Washington D.C., 2004, 8.

<sup>17</sup> World Bank, *Decentralization in Madagascar*. World Bank: Washington D.C., 2004, 2.

<sup>18</sup> World Bank, *Decentralization in Madagascar*. World Bank: Washington D.C., 2004, 2

<sup>19</sup> *Fokontany*: a sub-commune level of administration, similar to a village or neighborhood.

<sup>20</sup> These indicators were adapted from: Boko, Sylvain, *Decentralization and Reform in Africa*, Wake Forest University Press, 2002. pp. 79- 97



community members have in local authorities. A commune's tax recovery thus depends on existing human capital as well as the potential for acquiring appropriate skills in the future. A commune's ability to raise revenue independent of central government transfers is directly related to its capacity to achieve fiscal autonomy. Sub-national tax recovery is calculated by determining actual revenue as a percentage of the tax base.

**2. Sub-national tax autonomy** refers to the ratio of local tax revenue to total revenue of sub-national governments. Sub-national revenue includes tax and non-tax revenue, intergovernmental transfers and capital revenue.

**3. Ratio of revenue to expenditure** reflects the ability of a commune to raise sufficient tax revenue to cover the costs of social services.

**4. Analysis of local communities' revenue and expenditure components** can illustrate the specific strengths and weaknesses of a commune's fiscal decentralization policy.

## Tax Framework

Under the current model of decentralized taxation in Madagascar, tax collection is conducted on two main levels: the *deconcentrated* taxes, which are those collected by the central government and the *devolved* taxes, which are those collected at the commune level. The flow of deconcentrated and devolved taxes can be found in Annex 1.

Deconcentrated taxes are imposed and collected by the following central institutions:

- Ministry of Finance and Budget
- Directorate General of Taxes
- Fiscal Center
- District Administrative Officer (formally Chief Administrative Officer)
- Fokontany Head (*Chef de Fokontany*)

The devolved taxes are most pertinent for the purposes of this study of public finance at the commune level.

Devolved taxes are imposed and collected by the following local institutions:

- Mayor's Office (*Mairie*)- the executive branch of government at the commune level (elected every 4 years)
- Commune Council (*Conseil Communal*)- the legislative branch at the commune level which determines the level of taxes and oversees commune administration
- Treasurer (*Tresorier*)- maintains records of fiscal transactions
- Department of Revenue (*Service des Recettes*) - responsible for the collection of property taxes on buildings and land
- Local Tax Agents (*Agent de Recouvrement Fiscal*) - responsible for conducting the tax collection process

The most important devolved taxes include:

## **Water and Electricity Tax** (*Taxe communale sur l'eau et l'électricité*)

This tax is determined by the commune council, but must not exceed a rate of 10%. It is collected by JIRAMA or the commune, depending on the water provision system in each commune. All proceeds go to the commune budget.

In the communes where JIRAMA operates, its role is mainly associated with the technical aspects of water provision. However, they also collaborate with the commune and play a key role in the implementation of the taxes on water and electricity. The water and electricity taxes are applied to the fee which JIRAMA charges for its services. Therefore, this tax is paid directly to JIRAMA, who is then to forward the tax earnings to the commune.

The price of water<sup>21</sup> is determined by JIRAMA and is based on levels of consumption and varying production, distribution, and marketing costs. As mentioned above, the water and electricity tax level is determined by each individual commune and is applied as a percentage of this fee.

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<sup>21</sup> "Price of water" or "fee" here is used to describe a fee which is charged for water services, either by the commune or by JIRAMA. A water "tax" is the duty levied on this service fee by the commune.

## **Property Tax on Land** (*Impôt Foncier sur les Terrains*)

This tax is recovered annually by the communes and fokontany who also conduct the census in collaboration with the Fiscal Center. The rate of the land tax is dependent on the type and quality of land owned. The central government publishes a guide to determining the tax rates, and the commune council fixes the rate within a legal range. All proceeds from this tax are allocated to the commune budget.<sup>22</sup>

## **Property Tax on Buildings** (*Impôt Foncier sur les Propriétés Bâties*)

Like the tax on land, this tax is recovered annually by the commune and fokontany. By law, the rate of this tax can range from 5-10% of the determined value of property and the exact rate is decided by the commune council and therefore varies by commune, though this process can be complex in urban areas. All proceeds from this tax are allocated to the commune budget.<sup>23</sup>

## **Low-level Income Tax** (*Impôt Synthétique*)

This tax is collected annually by the Fiscal Center. It is paid on total income revenue exceeding 20,000,000 Ariary (Ar). The tax rate is set by the central government at 6%. The proceeds for the tax are divided- 60% is allocated to the commune level, and 40% to the regional level.<sup>24</sup>

## **License Tax to Sell Alcohol** (*Impôt de Licence*)

License fees are paid to the Fiscal Center, and each commune can determine how many licenses it chooses to give. By law, the rate must be between 100,000- 200,000 Ar, but the exact rate is set by the commune council. All proceeds eventually go to the commune budget.<sup>25</sup>

## **Tax on Slot Machines** (*Taxe Annuelle sur les Appareils Automatiques*)

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22 Gouvernement de Madagascar, Code Général des Impôts, Suivant la Loi de Finances 2008, Direction Général des Impôts, p. 123.

23 Gouvernement de Madagascar, Code Général des Impôts 2008, p. 135.

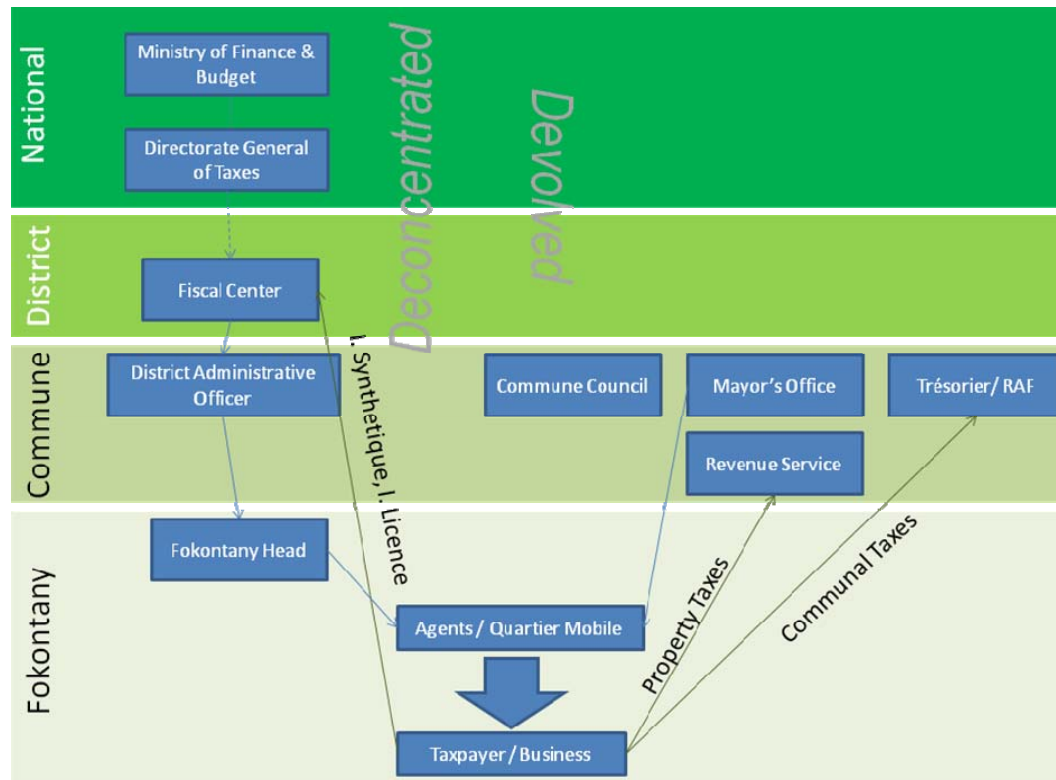
24 Gouvernement de Madagascar, Code Général des Impôts 2008, p. 23.

25 Gouvernement de Madagascar, Code Général des Impôts 2008, p. 139.

Each commune conducts its own census of casinos and the Fiscal Center uses the information obtained to recover the associated taxes. The rates for these taxes are centrally determined. Slot machines are subject to a 400,000 Ar tax, and all other machines are subject to a 100,000 Ar tax. All proceeds from these taxes remain in the commune budget.<sup>26</sup>

**Tax on Agricultural Products (*Ristourne*) and other Smaller Commune Taxes (*Impôt Parafiscal, Taxe Communale*)**

Each commune can decide to implement other taxes at their discretion, which are paid directly to the commune. Rates for such taxes are determined by the commune council, and all proceeds remain in the commune budget.



**Figure 1: Diagram of Institutions Involved in Taxation**

26 Gouvernement de Madagascar, Code Général des Impôts 2008, p. 153.

## Other Sources of Revenue for Communes

### Government Transfers

Government transfers are an important source of revenue for all communes. All communes receive a minimum allocation, and a per capita allocation based on size and status (urban or rural).<sup>27</sup> This distribution is unequal and favors urban settings; the per capita government transfer for urban residents is almost double that of rural residents.<sup>28</sup> This unequal distribution is often problematic given the artificial distinction between urban and rural communes (peri-urban areas outside of large cities are often considered rural). Additionally, government transfers are notoriously unpredictable, often delayed and sometimes undelivered. This makes fiscal planning on the local level incredibly difficult, especially in rural communes that depend heavily on these transfers. A positive aspect of the government transfer system is that it is transparent, and based on simple formulas.<sup>29</sup>

### Local Development Fund

The local development fund (FDL, by its French acronym), a specific form of intergovernmental transfer, has been discussed by the central government for years. Under the Madagascar Action Plan (MAP), devised in 2006, Challenge 6 called for the development of a Local Development Fund for use by communes. Official decree 2007-530 outlined the governmental structures and mission of

the FDL to assure communal and inter-communal investment.<sup>30</sup> The fund draws some operational and functional characteristics from a pilot program titled ACORDS financed by the

#### Priority Projects and Activities for MAP Challenge 1: Responsible Governance

1. Review all laws and regulations to transfer more power and responsibility to the Communes and Regions
2. Update Regional Development Plans through Territorial Planning, including imaging and spatial analysis using cartographic tools to identify economic potentials
3. Pass laws and reforms to give Communes and Regions more tax revenues and the right of tax collection
4. Develop and strengthen the Local Development Fund to improve the management of the resources and the funding of Communes
5. Create a forum and develop training programs to support Chefs de Region, Chef de District and Mayors
6. Foster the democratic control and the involvement of beneficiaries in the governance of local public institutions

Source: 2006 MAP

<sup>27</sup> World Bank, Decentralization in Madagascar. World Bank: Washington D.C., 2004, 39.

<sup>28</sup> World Bank, Decentralization in Madagascar. World Bank: Washington D.C., 2004, 55.

<sup>29</sup> World Bank, Decentralization in Madagascar. World Bank: Washington D.C., 2004, 39.

European Development Fund (EDF). The program gave subsidies to fund locally determined project priorities; 662 communes in the south of the country (among Madagascar's poorest areas) were eligible.<sup>31</sup> The structure of the FDL has evolved somewhat from this framework, calling for the establishment of district and regional support cells to further assist communes with plan creation and technical implementation.<sup>32</sup>

Madagascar's landmark decentralization framework, called the National Program for Decentralization and Deconcentration (PN2D), foresaw the number of communes benefitting from the FDL at 250 by 2008, 700 by 2011, and all communes by 2015. However, the FDL is only expected to become operational this year, with eligible communes receiving between 40,000 and 250,000 USD.<sup>33</sup> As of this writing, no reporting had yet surfaced of FDL transfers having been effectuated.

## Donor Grants and Loans

Another acceptable option for communes to seek financing is through requests from donors, both national and international, for grants and loans to complete their budgetary needs.<sup>34</sup>

## Central Government Income and Expenditures

Central government revenue is dependent on a few key taxes. In 2000, 78% of tax revenue was earned from the Value-Added Tax (VAT), corporate income tax and foreign trade taxes.<sup>35</sup>

Central government expenditure is highly centralized. It can be broken down into one of three categories; centralized (86.6%), deconcentrated (10% in health and education), and

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<sup>30</sup> Ministère auprès de la Présidence de la République, Chargé de la Décentralisation et de l'Aménagement du Territoire. DECRET N° 2007- 530. June 11, 2007.

<sup>31</sup> Marie-Martine Buckens, "Decentralisation - ACORDS: A Pioneering Programme," *The Courier*, No. 7. N.E., (August/September 2008).

<sup>32</sup> A.C.O.R.D.S. « Note de Reflexions sur le FDL : Dispositif Technique FDL, » March 3, 2008. Available at <http://www.acords.info/> (Accessed April 14, 2009).

<sup>33</sup> Annelaure Wittman, « La décentralisation en marche à Madagascar : les Fonds de Développement Local (FDL), » *MediaTerre*, November 18, 2008, <http://www.mediaterre.org/madagascar/actu.20081118140034.html>.

<sup>34</sup> Etienne Andrianarivelo, Percepteur Principale de Vavatenina, interview by Lovy Rasolofomanana, Honoré Mamindray Hafany, and Ernest Randriarimalala, Vavatenina, Madagascar, March 23, 2009.

<sup>35</sup> World Bank, Decentralization in Madagascar. World Bank: Washington D.C., 2004, 24.

decentralized (3.2% including transfers).<sup>36</sup> Only 4-5% of total government expenditure is decentralized expenditure (3% central government transfers, 1-2% revenues of communes).<sup>37</sup>

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<sup>36</sup> World Bank, Decentralization in Madagascar. World Bank: Washington D.C., 2004, 26.

<sup>37</sup> World Bank, Decentralization in Madagascar. World Bank: Washington D.C., 2004, 25.

## II. Methodology

### 1. Preliminary Research

Literature Review: included an extensive search of documents related to: water and sanitation within Madagascar; water sector institutions and current cost limitations, the current national and local tax schemes in Madagascar; review of tax policy analysis methodologies in decentralized developing countries.

Review of key items included:

- 2007-2008 SIPA-WaterAid Madagascar Study: Valuating Economic and Social Benefits of Improved Water and Sanitation Services
- Madagascar's Water Code (1999)
- Madagascar's National Sanitation Strategy
- Madagascar's 2008 Tax Law Reform
- Existing WaterAid studies and research
- Recent program appraisal documents from international donors in Madagascar

Country Comparative Analysis: assessed decentralized local tax schemes in Brazil, government subsidies to private water connections in Senegal, and sanitation tariffs and funds in Burkina Faso, to develop ideas for best practices.

Informational Interviews: were conducted with practitioners who have expertise in Madagascar, water and sanitation, and tax policy. Interviews were conducted with 1) Professor Wojciech Kopczuk, Assistant Professor of Economics at Columbia University, who specializes in local tax policy; 2) Piers Cross, of the UNDP Water Governance Program.

### 2. January Fieldwork

Two members of the SIPA team, Neda Sobhani and Aaron Dibner-Dunlap, traveled to Madagascar from January 6 to January 19, 2009 to conduct an initial fact-finding trip. The team visited the communes of Ankadikely Ilafy and Vavatenina. The goal of these trips was to



gather data and refine knowledge of institutions and stakeholders. Fieldwork activities included:

Interviews with:

- WaterAid Madagascar
- Government officials at national level
- Heads of communes at local level

For a full list of interviews conducted, see Annex 3.

### 3. Data Analysis

The team conducted data analysis based on the documents received from the Ankadikely Ilafy and Vavatenina commune visits. Data examined included: commune budgets, tax receipt registers, water sector level of performance, and demographic information. Budget calculations for Vavatenina can be found in Annex 4.

Based on a 2001 Cornell commune-level census in Madagascar, the team also created several indices on poverty, infrastructure, and risks to production to measure the conditions of Ankadikely Ilafy and Vavatenina to the national averages in Madagascar. For a description of index calculations, see Annex 2.

### 4. Institutional Map

After the January fieldwork, the team created an institutional map that was a visual representation of the flow of tax collection among different levels of government. This map helped to understand types of local taxes, methods of tax collection, and to identify possible inefficiencies in payment and collection.

### 5. Problem Tree and SWOT Analysis

The team generated problem trees to contextualize the current situation of the tax policy in both Vavatenina and Ankadikely Ilafy. These outlined the central issues that explain low tax revenue, focusing on public finance and management.

The team also created a Strengths, Weaknesses, Opportunities, and Threats (SWOT) chart in order to analyze the capacity for both Ankadikely Ilafy and Vavatenina to generate additional tax revenue. This SWOT analysis was completed separately for both communes and helped inform the viability of the proposed policy recommendations. Both the problem tree and SWOT analysis appear in the commune case studies.

## 6. Outsourced Fieldwork

Due to the political tension within Madagascar in March of 2009, the SIPA team was unable to travel to Madagascar for the second scheduled fieldwork trip. Instead, with the help of Lovy Rasolofomanana at WaterAid Madagascar, two local Malagasy researchers, Honoré Mamindray Hafany and Ernest Randriarimalala, were hired to conduct fieldwork. Lovy Rasolofomanana and the two researchers conducted fieldwork in the communes of Vavatenina and Ankadikely Ilafy.

Broadly, the purpose of the fieldwork was to test policy scenarios through focus groups of taxpayers, community members, and other stakeholders, as well as through interviews with government officials and water service providers (JIRAMA and others). The goal was also to collect further data to refine the tax situation analysis. Moreover, the team's focus group guides were designed to gather data on the understanding of taxes, willingness and ability to pay taxes and for water, and the satisfaction with water provision.

Using the interview guides and focus group questionnaires that the SIPA team developed, the researchers completed the following fieldwork:

### Interviews:

- JIRAMA
- ANDEA
- Tax Collectors
- Commune heads in charge of financial management
- Individual taxpayers

## Focus groups:

- Farmers
- Small to medium size business owners
- Market sellers

For a sample of the interview and focus group guides, see Annex 5.

## **7. Data Limitations**

Because the SIPA team was unable to conduct a second fieldwork trip to Madagascar, the team faced several limitations. First, the SIPA team originally planned to present a study on four communes, including Mahabo and Antanifotsy. Because of the travel constraints, the team limited the study to communes visited on the first trip, Ankadikely Ilafy and Vavatenina. Second, the team planned to conduct focus groups in both Ankadikely Ilafy and Vavatenina. Because of time and resource constraints, the local researchers were only able to conduct the focus groups in Vavatenina. Lastly, we recognize the possibility that the analysis is limited by a suboptimal level of fieldwork in Madagascar. As a result, the team's analysis is also supplemented by that of the local researchers who conducted fieldwork in place of the SIPA team.

## III. International Case Studies

Below are three comparative cases of relevant situations in other countries, with best practices and recommendations highlighted within them. Although no country quite matched Madagascar's structural divisions and institutional framework, several countries faced similar challenges. The team recommends that WaterAid Madagascar and the Government of Madagascar learn from the successes of these cases.

### Senegal Case Example: Government Subsidy

The government of Senegal actively supports the growth of both the water and sanitation sectors through government subsidies. Although subsidies can take many forms, one that has led to the rapid expansion of private connections to the water line in Senegalese cities is the “social connection” (*branchements sociaux*). Often, water infrastructure may exist, but low-income households cannot afford the capital cost of connecting their household to the water line.<sup>38</sup> Up to 85% of the cost of a household connection may be subsidized by the state through the social connection program in Senegal.<sup>39</sup> The Senegalese Government has sustained these programs over several years, leading to the dramatic increase in water coverage, especially in urban areas. For example, 69% of all new household connections to the city water line in the city of Louga, between the years of 2001-2007, were done under the subsidy program.<sup>40</sup>

### Uganda Case Example: Decentralization<sup>41</sup>

Uganda has seen a high increase in the access to safe water in recent years: from 45% coverage in 2000, to 63 % for rural areas and 65% for urban areas in 2007. This was achieved through

<sup>38</sup> Jean-Paul Minvielle, *La pauvreté au Sénégal: des statistiques à la réalité* (Paris: Karthala Editions, 2005), 196.

<sup>39</sup> Babacar Diouf, Directeur Régional Sénégalaise des Eaux, interview by author, Louga, Senegal, July 15, 2008.

<sup>40</sup> Babacar Diouf, July 15, 2008.

<sup>41</sup> World Bank. “World Water Week Conference.” Washington, D.C. February 2009.

broad sector reform, closely related to the decentralization policies initiated in Uganda in 1997. The goal of the decentralization policies in regards to the provision of services like water and sanitation was to transfer responsibility from the central to local government, which would have a greater capacity to manage service provision. Yet, central institutions still play the role of facilitators and ensure that the local governments have the necessary resources. In the rural areas, communities are responsible for requesting, planning, contributing, operating and maintaining water and sanitation facilities. In urban areas and small towns, lease contracts to private operators were issued emphasizing the importance of strong monitoring and evaluation activities to ensure quality performance. More specifically, one of the key factors explaining coverage increase is the subsidization of the connection costs.

## **Burkina Faso Case Example: Sanitation Tariff<sup>42</sup>**

Burkina Faso, one of the world's least developed countries, must provide access for an additional 7.3 million people to proper sanitation services to meet the Millennium Development Goals (MDGs). Even so, an innovative tariff system, implemented since 1984 by the country's National Water and Sanitation Office, has already come a long way in providing funds for sanitation. The tariff system is linked to a strategic plan for improving sanitation conditions among the urban poor. While the structure of the tariff has changed over its 25-year history, its current structure requires a small tariff added on to all water bills, ranging from 10 FCFA to 52 FCFA per cubic meter, depending on the type of water endpoint technology. Revenues from the tariff, of which 82% come from customers with private water connections, are kept in a special Sanitation Fund that is used to finance sanitation projects according to local development priorities. Review of the history of the surcharge and its successes have led to the following recommendations:

- Affiliate the provision of sanitation services with an institution capable of managing revenues
- Ensure autonomous management of the surcharge
- Focus on certain aspects of sanitation, such as education, depending on local needs

<sup>42</sup> Annie Savina and Peter Kolsky, "Mobilizing Resources for Sanitation," Water and Sanitation Program Field Note, August 2004.

- Define performance indicators for the surcharge, and measure whether objectives are reached
  - Inform stakeholders carefully about the use of the surcharge
  - Establish partnerships between towns and water utilities
  - Improve the targeting of the subsidy beneficiaries
  - Keep sanitation costs to a minimum, and learn from demand

## IV. Case Study: Vavatenina

### Background

Vavatenina is a rural commune located 570 kms northeast of the capital, Antananarivo. It is situated 45 kms from East Fénérive, the regional capital, and 130 kms from Toamasina, the provincial capital. Vavatenina is located in the region of Analanjirofo and the district of Vavatenina. Vavatenina is a rural commune of 1<sup>st</sup> category, which means the commune has a representative to the Treasury to manage public finances.

The commune of Vavatenina is comprised of 22 fokontany. Agriculture is the dominant economic activity in Vavatenina, as approximately 88.5% of the commune is employed in agriculture. Vavatenina has less risk to production and has a higher level of infrastructure relative to the national average of Madagascar; yet it still suffers from a greater amount of poverty than the Madagascar average among communes. Relative to Ankadikely Ilafy, Vavatenina has a greater amount of poverty, production risks, and less infrastructure.<sup>43</sup>

#### Snapshot Profile:

**Table I: Demographics (As of 2009)**

Population	50,858
Growth Rate	3%
Population Density	206,5 habitants / km <sup>2</sup>
Mortality Rate	3,84%

*Sources: Narisoa Andriamahefa « Réponse Local au Objectif du Millénaire pour le Développement (RLOMD) » Commune Rurale de Vavatenina, October 2007, and chef District Vavatenina, Le médecin inspecteur du Centre Hospitalier de District*

<sup>43</sup> Cornell Study, 2001.

**Table II: Age Breakdown (As of 2007)**

Age Group	Number of population
0 - 5 years	6,374
6 - 10 years	7,399
11 - 17 years	13,794
18 - 60 years	20,048
60+	3,243
Total	50,858

Source: Narisoa Andriamahefa « Réponse Local au Objectif du Millénaire pour le Développement (RLOMD) » Commune Rurale de Vavatenina. October 2007.

## Economy

Main sectors: Most people are employed in agriculture and services. Industry is virtually non-existent in Vavatenina with the exception of small manufacturing of *toaka gasy*, a locally made rum, and *betsabetsa*, a type of craft.<sup>44</sup>

Dominant agriculture: Rice represents 47% of the total area cultivated.<sup>45</sup>

**Table III: Summary of the situation of agricultural production in the town (As of 2000)**

Products	Surface Area under Cultivation (ha)	Production (tons)
Tavy Rice	1500	1515
Irrigated Rice	450	675
Cassava	49	735
Sweet Potato	10	100
Banana	30	450
Sugarcane	200	3600
Coffee	125	87,5

<sup>44</sup> Narisoa Andriamahefa « Réponse Local au Objectif du Millénaire pour le Développement (RLOMD) » Commune Rurale de Vavatenina. Octobre 2007.

<sup>45</sup> Narisoa Andriamahefa « Réponse Local au Objectif du Millénaire » 2007..



Cloves	6000	9600
Corn	10	12

Source: Service de planification Fénérive- Est Année 2000, Monographie de la région de l'EST.

## Water Provision

With JIRAMA absent from water provision in the commune, the local government has been responsible as a last-resort provider, according to the 1999 Water Code. They have been able, through grants from NGOs (Hydraulique Sans Frontière ,Frères St. Gabriel [FSG] and InterAide), to provide decent access to potable water throughout the area; according to local officials, only 3 out of 22 fokontany do not currently have access to potable water through either public or private taps. (FSG works in 4 fokontany in installing boreholes which, according to the heads of the commune, have better water than other sources.) Though water coverage is relatively high for a rural commune, over half of the installed taps are currently nonfunctional and the underlying pipe network is nearly 30 years old.<sup>46</sup> This has resulted in an underperforming system in which the precipitous drops in pressure prevent the water from reaching certain of the public taps.<sup>47</sup> The water treatment and quality are also sub-standard in Vavatenina.

The Mayor's office, including the Commune Council, is responsible for all decisions regarding the potable water network. In addition, each tap, whether public or private, has a designated manager elected by the beneficiaries of the tap. The manager is responsible for checking for damages and ensuring that its users pay the appropriate fees. The fees, once collected, are deposited by the managers into the commune's account. Such a management system has been in place for years.<sup>48</sup>

The commune originally set its fees for service through public debate and referendum in 1980, and these have only been adjusted once since that time. This adjustment was in 2007, with

<sup>46</sup> Noso Barthelemy, Deuxieme Adjont au Maire and Rafidy Alain, Responsable Service Tresorerie Comptable, interview by Lovy Rasolofomanana, Honoré Mamindray Hafany and Ernest Randriarimalala, Vavatenina, Madagascar, March 24, 2009.

<sup>47</sup> Noso Barthelemy, March 24, 2009.

<sup>48</sup> Noso Barthelemy, March 24, 2009.

the completion of another NGO-funded investment project.<sup>49</sup> For monthly unmetered usage, the cost per household for private tap users is 4000Ar and for public tap users is 2000Ar. Revenue from this sector has historically been high and has comprised over 25% of all locally-generated revenue.<sup>50</sup> However, in recent years the rate of payment has dropped in accordance with the quality of the service, and in 2008, although 7,400,000Ar were budgeted for this sector, only 88,000Ar were recovered.<sup>51</sup> One official also acknowledges the fact that the tariffs collected from water service often have not been used to maintain or improve the current system but, rather, used to finance other activities authorized by the municipality.<sup>52</sup> Furthermore, the local government does not maintain a local water and sanitation fund. This failure to keep revenue generated in the water sector for this sector, in addition to poor cost recovery in the water sector, has further enabled the cycle of degradation. Sanctions against users who do not pay have not been enacted, as the commune understands the plight of users with poor service quality.<sup>53</sup> Water revenue is expected to have declined in 2008 and 2009 as system degradation has accelerated.<sup>54</sup>

Interviews with twenty-three participants with various occupations revealed opinions on current water service and tariffs. Regardless of their different social positions, all participants in the focus groups clearly stated that their water service lacks of quantity and quality of water, consistent with reports by officials. While the people who use private water service encounter fewer problems with water service, those who use public water service face problems with lack of water and poor quality of water. Some calculate the public taps to be functional only 90 days out of the year, and others state that they must travel over 500 meters from their homes to find potable water. However, all participants stated a willingness to pay, possibly even at increased rates, if the system were reliable.

The commune has tried to improve the system over the years, but without lasting success thus far. It has hired two plumbers to repair and to maintain the current system. As lack of operating funds makes it difficult for the municipality to maintain their salaries, the pipes remain clogged and problems continue. In the past, the municipality had entrusted water

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<sup>49</sup> Noso Barthelemy, March 24, 2009.

<sup>50</sup> Data from 2005 Budget of Vavatenina.

<sup>51</sup> Noso Barthelemy, March 24, 2009.

<sup>52</sup> Noso Barthelemy, March 24, 2009.

<sup>53</sup> Noso Barthelemy, March 24, 2009.

<sup>54</sup> Noso Barthelemy, March 24, 2009.

services to an association named Lagnanana. However, inappropriate management styles resulted in wasted public funds and the commune soon reestablished control over water services.<sup>55</sup>

Common among the interviewees and focus group participants seemed to be a lack of consensus about the distinction between tax, tariff, and fee for service. While water-related revenue was referred to as a tax, the team believes it to be in fact a fee for service as it is directly related to provision of water services.

Management capacity among officials of the commune is also a cause for concern. Some officials were not familiar with the Water Code or other legislation regarding water systems and resource management. In addition to low management capacity, the water system in Vavatenina also lacks sufficient technical capacity. As mentioned, the commune only staffs two plumbers for the entire water system.

Although the road to achieving better and more consistent water service seems rocky, responses from both government officials and citizens with different occupations has apprised the team that they both know the source of the problem and understand how to tackle the problem, which will make it easier to implement and perpetuate the proper system when they have enough funds to take the first steps.

## Sanitation in Vavatenina

This study did not go into great detail on the situation of sanitation in Vavatenina. It was found, however, that there is no tax on sanitation in Vavatenina, although the commune has considered implementing a fee for this service.<sup>56</sup>

## Tax Overview

### Citizen Perspectives on Payment of Taxes

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<sup>55</sup> Noso Barthelemy, March 24, 2009.

<sup>56</sup> Noso Barthelemy, March 24, 2009.

Interviews with taxpayers of Vavatenina highlighted motivations for paying taxes, expectations and desires of taxpayers, as well as perceived shortfalls of local government. Many taxpayers interviewed explained that they paid taxes out of obligation to abide by the law, and for the socio-economic development of their commune. They also expressed the sentiment that taxes were necessary for the development of the commune. But, the respondents did not present concrete examples of projects financed by tax dollars, and expressed disappointment with the amount of investment they witnessed. For example, the market sellers voiced the complaint that although they pay a market ticket,<sup>57</sup> each day they have not seen any improvements or new infrastructure for the market.<sup>58</sup> All people interviewed stated that water provision in Vavatenina was insufficient and should be a top priority of the commune.<sup>59</sup>

In general, the interviews showed that taxpayers have a firm understanding of how to pay taxes, and the amount of taxes that they pay yearly. All of the people interviewed in the market sellers focus group paid the low-level income tax, and none paid the property tax on land or buildings.<sup>60</sup> Most of the people interviewed felt that the tax rate and the amount of taxes that they bore were very high, and some said that it should be decreased.<sup>61</sup> The woodworkers stated that they refuse pay any taxes because they do not have the right to harvest wood from the forests.<sup>62</sup> The strong agrarian base of Vavatenina's economy and susceptibility to seasonal variations was also reflected in the interview responses. The market sellers, for example, stated that the payment period should not coincide with the hungry season (period between harvests). Farmers bear the burden of many taxes in Vavatenina, including the agricultural products tax, property tax on land and buildings (depending on whether or not they own or rent their land) and other taxes.

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<sup>57</sup> The market ticket is a form of para-fiscal tax.

<sup>58</sup> Focus Group Interview with Market Sellers of Vavatenina, interview by Honoré Mamindray Hafany and Ernest Randriarimalala, Vavatenina, Madagascar, March 26, 2009.

<sup>59</sup> Focus Group Interview with Market Sellers of Vavatenina, March 26, 2009.

Focus Group Interview with Woodworkers of Vavatenina, interview by Lovy Rasolofomanana, Vavatenina, Madagascar, March 26, 2009.

<sup>60</sup> Focus Group Interview with Market Sellers of Vavatenina, March 26, 2009.

<sup>61</sup> Focus Group Interview with Market Sellers of Vavatenina, March 26, 2009.

<sup>62</sup> Focus Group Interview with Woodworkers of Vavatenina, March 26, 2009.

A desire among taxpayers for greater transparency and knowledge of where tax money is spent was also expressed by those interviewed in Vavatenina. All twenty-three taxpayers that participated in the focus groups could not describe where their tax money went.<sup>63</sup> Many of the responses also showed that taxpayers identified the beneficiaries of their taxes to be the commune and the civil servants. Even more problematic, these taxpayers are quite concerned with corruption. The woodworkers named “fighting against corruption” as what should be the second priority for the commune.<sup>64</sup> Corruption among government officials and the local tax collectors were both causes for concern among tax payers. The collection methods of the tax collectors generated concerns regarding transparency. For example, the woodworks explained the incidence of a loss of tax money between its collection in Vavatenina and transfer to the regional fiscal center.<sup>65</sup> Additionally, the taxpayers of Vavatenina did not express any feeling of inclusion or empowerment in the process of determining where tax money was spent.

### Principal Taxes

Interviews with officials of Vavatenina highlighted the importance of the low-level income tax and the agricultural products tax (*ristourne*), as well as the potential importance of the property taxes on both land and buildings. Between 2005 and 2007, locally generated fiscal and non fiscal revenue comprised 16 - 33% of total commune receipts.<sup>66</sup>

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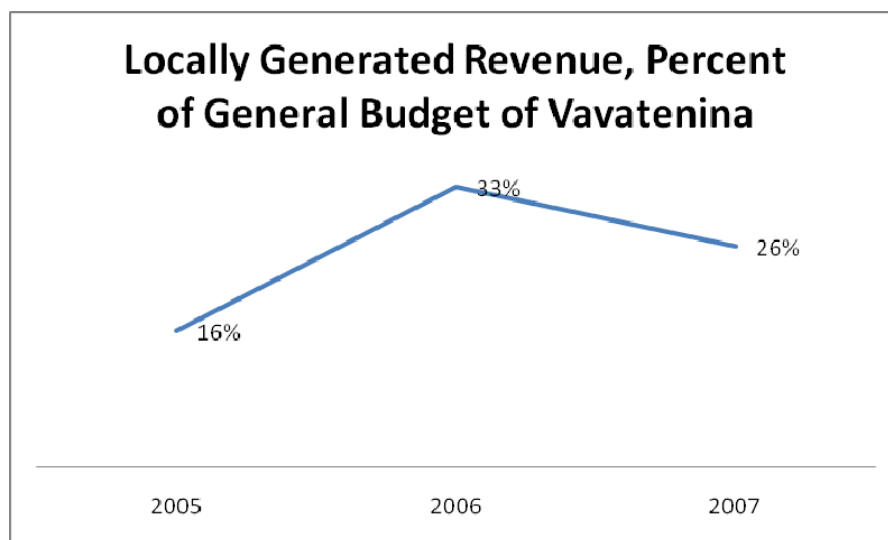
<sup>63</sup> Focus Group Interview with Market Sellers of Vavatenina, March 26, 2009.

Focus Group Interview with Woodworkers of Vavatenina, March 26, 2009.

<sup>64</sup> Focus Group Interview with Woodworkers of Vavatenina, March 26, 2009.

<sup>65</sup> Focus Group Interview with Woodworkers of Vavatenina, March 26, 2009.

<sup>66</sup> Etienne Andrianarivelo, Percepteur Principale de Vavatenina, Madagascar, interview by authors, Vavatenina, January 8, 2009.



**Figure 2**

*Source: Vavatenina receipts 2005-2007.*

Since the tax law reform in 2007, the low-level income tax has become the largest tax receipt for the commune of Vavatenina.<sup>67</sup> In 2007, the low-level income tax was 11% of the commune's total budget, and this tax was 42% of all locally generated fiscal and nonfiscal revenue.<sup>68</sup> Prior to 2007, the low-level income tax was part of the professional tax, and only 25% of this revenue was kept for the budget of the commune. With the tax reform, however, 60% of the newly created low-level income tax goes to the budget of the commune. In addition to the effects of this favorable legal change, one government official stated that the low-level income tax is the largest source of tax revenue in this commune because it is collected on a wide range of economic activities, and because almost all residents of Vavatenina fall into this income category.<sup>69</sup> Recognizing the impact of the large informal sector, the commune itself has taken measures to increase the revenue from this tax. The commune developed a list of taxable activities for which the income is generally less than 20 million Ar. This list was approved by the Fiscal Center and led to an increase of taxable activities and the number of taxpayers.<sup>70</sup> However, incentives for formally registering small businesses remain quite marginal, and censuses of business are infrequent.

<sup>67</sup> Rafy Diurbain, Tresorier et Comptable, and Lala Filibert, Première adjoint au maire, interview by authors, Vavatenina, Madagascar, January 8, 2009.

<sup>68</sup> Etienne Andrianarivelo, January 8, 2009.

<sup>69</sup> Etienne Andrianarivelo, March 23, 2009.

<sup>70</sup> Etienne Andrianarivelo, March 23, 2009.

Collection of the agricultural products tax has made advances in Vavatenina, but still faces several challenges. An administrative change in the collection of the agricultural products tax has favored the commune and led to increased revenue. Prior to 2006, the agricultural products tax was only collected by the region. But now, the commune is also authorized to impose collection of the agricultural products tax. This tax can be especially lucrative during the harvest season of certain local crops. For example, the agricultural product tax is quite lucrative during the litchi harvest season. However, because this tax is directly administered upon agricultural goods, the revenue from this tax varies greatly by season. Furthermore, there may be additional cash and export crops that are not being subjected to the agricultural products tax. And finally, the inconsistency of payment stations (road blocks) greatly impacts the amount of taxes collected in this sector.

In Vavatenina, the property tax on buildings and the property tax on land have the potential to generate significant revenue for the commune. From 2005-2007, the property tax on land generated no revenue and the property tax on buildings accounted for less than 1% of the total tax receipts in the commune. Interestingly, between 2005 and 2007, the commune budgeted for a significant receipt of both the property taxes on buildings and land. This projected income may have been because of the property census was due to be completed during this time. In any case, the local Inspector (*percepteur*) gives several reasons why practically no property taxes on buildings or land was collected in these years. The explanations include; a lack of personnel in a position to do this work, the land census was not completed, a lack of public knowledge about these two taxes, and a lack of political will to recover these taxes.<sup>71</sup> Additionally, only 05% of the land in the commune is titled.<sup>72</sup> On a positive note, a census for the property tax on land was completed in 2007, and tax collection based on this census began in 2008.<sup>73</sup>

There is a tariff associated with water use in Vavatenina, but there is no water tax. Comprehension of the difference between a tax and a tariff appears to be low among commune

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<sup>71</sup> Etienne Andrianarivelo, March 23, 2009.

<sup>72</sup> Vavatenina Land Records Officer.

<sup>73</sup> Etienne Andrianarivelo, March 23, 2009.

Focus Group Interview with Farmers of Vavatenina, Madagascar, interview by Lovy Rasolofomanana, Honoré Mamindray Hafany and Ernest Randriarimalala, Vavatenina, Madagascar, March 26, 2009.

officials and citizens of Vavatenina. The two terms are often used interchangeably when talking about water price and provision. The sale of water in Vavatenina is a significant source of revenue for the commune. For example, revenue from the sale of water comprised 3-5% of the budget from 2005-2007 and was 13-27% of the commune's locally generated fiscal and nonfiscal revenue in those years.<sup>74</sup> Although the sale of water is a significant portion of the commune's locally generated revenue, the commune is not making a profit on this service.

The commune of Vavatenina also generates revenue through small fees for posting a sign, festivities, use of market space, etc.

Although some improvements have been made in regards to the administration of local taxes, the local government's capacity for managing and collecting tax revenue is insufficient. The process of monitoring tax payment, delivering bills, and following-up on delinquent payments is slow and inefficient.

**Table IV: Fiscal and Nonfiscal Revenue in Vavatenina**

	Revenue as a Percent Of Total Budget			Revenue as a Percent of All Locally Generated Fiscal and Nonfiscal Revenue		
	2005	2006	2007	2005	2006	2007
Low-level Income Tax <sup>75</sup>	1.07%	1.18%	11.00%	5%	6%	42%
Property Tax on Buildings	0.12%	0.03%	0.50%	> .5%	0	2%
Property Tax on Land	0.00%	0.00%	0.00%	0	0	0
Agricultural Products Tax	6.00%	16.00%	6.00% <sup>76</sup>	32%	33%	23% <sup>77</sup>
Water	5.00%	4.70%	3.40%	27%	26%	13%

Source: Vavatenina receipts 2005-2007

<sup>74</sup> Etienne Andrianarivelo, January 8, 2009.

<sup>75</sup> 2005 and 2006 data is for the additional penny on the professional tax (*centime additionnelle sur la taxe professionnel*)

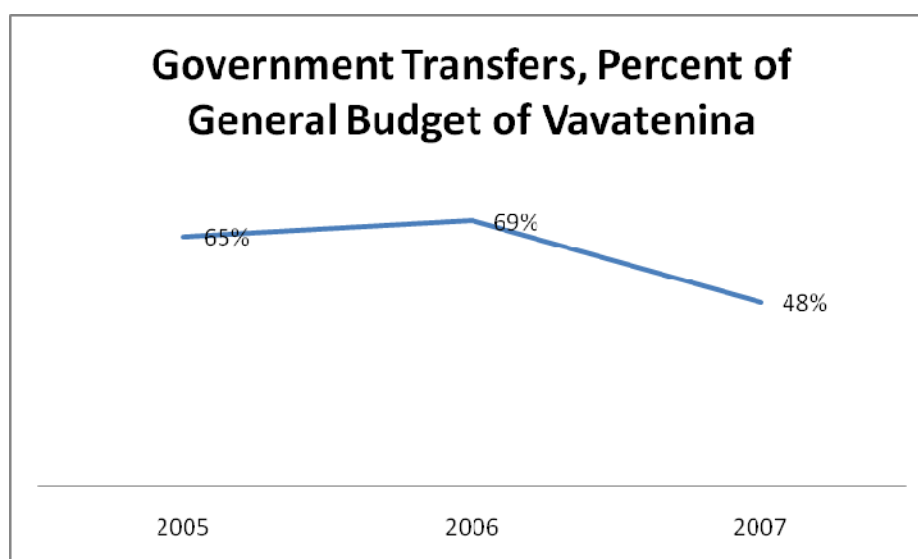
<sup>76</sup> The tax on agricultural products (*ristourne*) was lumped with other taxes during this year

<sup>77</sup> Other. The tax on agricultural products (*ristourne*) was not explicitly named.



## Government Transfers

In Vavatenina, central government transfers are important elements of the commune's budget. Between 2005 and 2007, they comprised 48-69% of the commune's total budget. The largest government transfers are restricted for specific uses only. These include; an education subsidy (*Subvention aux Ecoles Primaires Publiques - EPP*), a health subsidy (*Subvention aux Centres de Santé de Base - CSB*), a local government operation subsidy (*Subvention de Fonctionnement*), and an investment subsidy (*Subvention d'investissement*). The amounts of most government transfers are directly related to the population of a commune and services rendered. For example, the EPP and CSB transfers in Vavatenina have increased over the years because the number of primary school students and patients at the health center has increased.<sup>78</sup> The CSB subsidy is primarily used to pay salaries for personnel at the health clinics, and the salaries of government employees are paid by the subsidy for government operations. The investment subsidy is to be used for public infrastructure projects (rehabilitation or construction of schools, roads, etc).



**Figure 3**

*Source: Vavatenina receipts 2005-2007*

A specific process is followed to ensure the transparent use of government transfers. First, the government sends the transfer to the Inspector (*percepteur*). The treasurer and mayor are

<sup>78</sup> Etienne Andrianarivelo, March 23, 2009.

then given a notice that the commune's account has been credited. The amount of the transfer must be publicly posted outside the Mayor's office, and the communal council will then deliberate on how to proceed. It is important to note that it is the role of the communal council and executive branch of the Mayor's Office to authorize expenditures, and it is the role of the Inspector to keep the accounting. The Inspector (*percepteur*) assures that the funds are used in accordance with public accounting principles, and the commune calls for bids and implements the work.<sup>79</sup>

Although the central government transfers are an important element of the commune's budget, they are not dependable. For example, the last CSB transfer was eight months late and the staff of the local health center went unpaid during that time.<sup>80</sup> The commune also faces difficulties of budgeting because they are not always informed of the extent and timing of projects funded by other outside actors (NGOs that are active in Vavatenina).<sup>81</sup>

Since the commune of Vavatenina is responsible for the provision of water, these central government transfers are especially important. According to officials in the commune of Vavatenina, "the water tariff is not enough, and on top of that, when this revenue arrives at the account of the commune, it is used to cover the costs of other services or activities in the commune. In summary, the commune is not able to cover its operating costs [for water provision or other sectors] with its own receipts. Luckily there are state subsidies to finance the deficit."<sup>82</sup> Although state subsidies are used to finance the deficit, a subsidy for water and sanitation provision could lead to improvements in existing water infrastructure and expansions in the current level of water coverage. However, "there has never been a state subsidy that is dedicated to water and sanitation."<sup>83</sup>

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<sup>79</sup> Etienne Andrianarivelo, March 23, 2009.

<sup>80</sup> Noso Barthelemy, March 24, 2009.

<sup>81</sup> Noso Barthelemy, March 24, 2009.

<sup>82</sup> Noso Barthelemy, March 24, 2009.

<sup>83</sup> Noso Barthelemy, March 24, 2009. .

### SWOT Analysis

The findings detailed above are synthesized and structured here in order to highlight the strengths, weaknesses, opportunities and threats of generating revenue from tax collection in Vavatenina. This SWOT analysis helps to visualize more clearly the main challenges of improving tax revenue in this town.

# Case Study: Vavatenina

## Strengths

- 1) Democratic processes of allocating grants.<sup>84</sup>
- 2) The community is mainly agricultural and poor. However, they already have a water system. This implies that people give importance to water and are willing to pay for the service.
- 3) Citizens' opinion is highly taken into account when discussing water tariffs.<sup>85</sup>

## Weaknesses

- 1) Very high percentage of population with low income (farmers). Difficult to increase tax base since sensitivity is high.<sup>86</sup>
- 2) Lack of dialogue and coordination between different government officials in management of the commune. This may provoke opacity in tax collection and management processes.<sup>87</sup>
- 3) The list of taxable land is not updated, land titling is low, and people have low willingness to pay property tax on land.<sup>88</sup>
- 4) Poor people's awareness about the property tax on land and the property tax on buildings is low.<sup>89</sup>
- 5) Poor political will to improve tax collection.<sup>90</sup>
- 6) Some of the tax collection and management mechanisms are slow (from collection of tax to budgeting approval and expenditure) (like the low-level income tax).<sup>91</sup>
- 7) The water system is highly deteriorated, people's willingness to pay for that system diminishes every day.<sup>92</sup>
- 8) Despite not being able to collect enough water-revenue to maintain the water system, the water revenue collected is used to pay for other sectors within the municipal budget.<sup>93</sup>
- 9) Water tariffs are fixed. This impedes adaptation to cost recovery and probably minimizes water revenue overall (and constrains efficiency in water use).<sup>94</sup>
- 10) Tariffs were not revised in the period from 1980 to 2007, there is no evidence they are being adapted to inflation or economic growth indexes with a certain frequency and this could be another lost opportunity to increase revenue.<sup>95</sup>

<sup>84</sup> Etienne Andrianarivelo, March 23, 2009.

<sup>85</sup> Noso Barthelemy, March 24, 2009.

<sup>86</sup> Narisoa Andriamahefa « Réponse Local au Objectif du Millénaire » 2007.

<sup>87</sup> Etienne Andrianarivelo, March 23, 2009.

<sup>88</sup> Etienne Andrianarivelo, March 23, 2009.

<sup>89</sup> Etienne Andrianarivelo, March 23, 2009.

<sup>90</sup> Etienne Andrianarivelo, March 23, 2009.

<sup>91</sup> Etienne Andrianarivelo, March 23, 2009.

<sup>92</sup> Noso Barthelemy, March 24, 2009.

<sup>93</sup> Noso Barthelemy, March 24, 2009.

<sup>94</sup> Noso Barthelemy, March 24, 2009.

<sup>95</sup> Noso Barthelemy, March 24, 2009.

## Case Study: Vavatenina

	<p>11) Evidence that residents are not sure how tax revenue is used by the commune (lack of transparency perceived)<sup>96</sup></p> <p>12) Evidence that cost of connection to water system might be too high for poorer habitants; this might impede them from connecting to the system and leads to less revenue for the water system overall.<sup>97</sup></p> <p>13) Large difference between what the commune has budgeted and what is received.<sup>98</sup></p> <p>14) Too much reliance on people's opinion to fix water tariffs.<sup>99</sup></p> <p>15) Lack of awareness of current legal framework for water.<sup>100</sup></p>
<p><b>Opportunities</b></p> <p>1) There are signs of overall growth in the community (demographic, economic) so eligibility and base for taxes can potentially increase if this growth is maintained or increased.<sup>101</sup></p> <p>2) The informal sector is large. This is a weakness (because the commune is not able to tax business in this sector) and an opportunity because it is a large potentially taxable market.<sup>102</sup></p> <p>3) Presence of NGOs in the area might be willing to play a key role in the upgrading of water system (capital costs, facilitation, monitoring...)<sup>103</sup></p> <p>4) Solid waste collection is a municipal service that is not taxed yet.<sup>104</sup></p> <p>5) People are willing to pay even more than what they pay now for the water system (assuming good service).<sup>105</sup></p>	<p><b>Threats</b></p> <p>1) Low levels of investment in the agriculture sector make it more vulnerable to risks (natural, financial...)<sup>106</sup></p> <p>2) No availability of specific transfers for water and sanitation sector. This makes planning difficult and management of water systems more vulnerable to failure.<sup>107</sup></p> <p>3) Unpredictability of transfers makes local planning (for decisions on the different tax bases, for instance) difficult.<sup>108</sup></p> <p>4) Too much reliance on tax collection through public servants visiting households might imply low efficiency due to high potential for corrupt practices.<sup>109</sup></p> <p>5) Certain perception that taxes are already high<sup>110</sup></p> <p>6) Small interventions from NGOs or external actors providing only temporary solutions in terms of infrastructure might only sustain the poor functioning water system and delay the possibility for an integral upgrading.<sup>111</sup></p> <p>7) Decentralization might lead to a process of increasing inequalities among communes. The threat remains in capital evasion if taxes are not applied</p>

<sup>96</sup> Noso Barthelemy, March 24, 2009.

<sup>97</sup> Noso Barthelemy, March 24, 2009.

<sup>98</sup> Noso Barthelemy, March 24, 2009.

<sup>99</sup> Noso Barthelemy, March 24, 2009.

<sup>100</sup> Noso Barthelemy, March 24, 2009.

<sup>101</sup> Narisoa Andriamahefa « Réponse Local au Objectif du Millénaire » 2007.

<sup>102</sup> Etienne Andrianarivelo, March 23, 2009.

<sup>103</sup> Noso Barthelemy, March 24, 2009.

Etienne Andrianarivelo, March 23, 2009.

<sup>104</sup> Noso Barthelemy, March 24, 2009.

<sup>105</sup> Focus Group Interview with Farmers of Vavatenina, March 26, 2009.

## Case Study: Vavatenina

	uniformly, creating competition among communes to attract capital.
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Therefore, despite some intrinsic difficulties in raising tax revenue in Vavatenina, like the low tax base of poor farmers, there are still important challenges that could be confronted when upgrading the tax collection system. For example, the lack of investment in the maintenance of the water system, the low levels of awareness on how certain taxes work, and the perceived low-benefits of paying taxes. In order to better understand these challenges, we have created a problem tree where the cause/effect relations between the different challenges could be easily visualized.

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<sup>106</sup> Narisoa Andriamahefa « Réponse Local au Objectif du Millénaire » 2007.

<sup>107</sup> Noso Barthelemy, March 24, 2009.

<sup>108</sup> Noso Barthelemy, March 24, 2009.

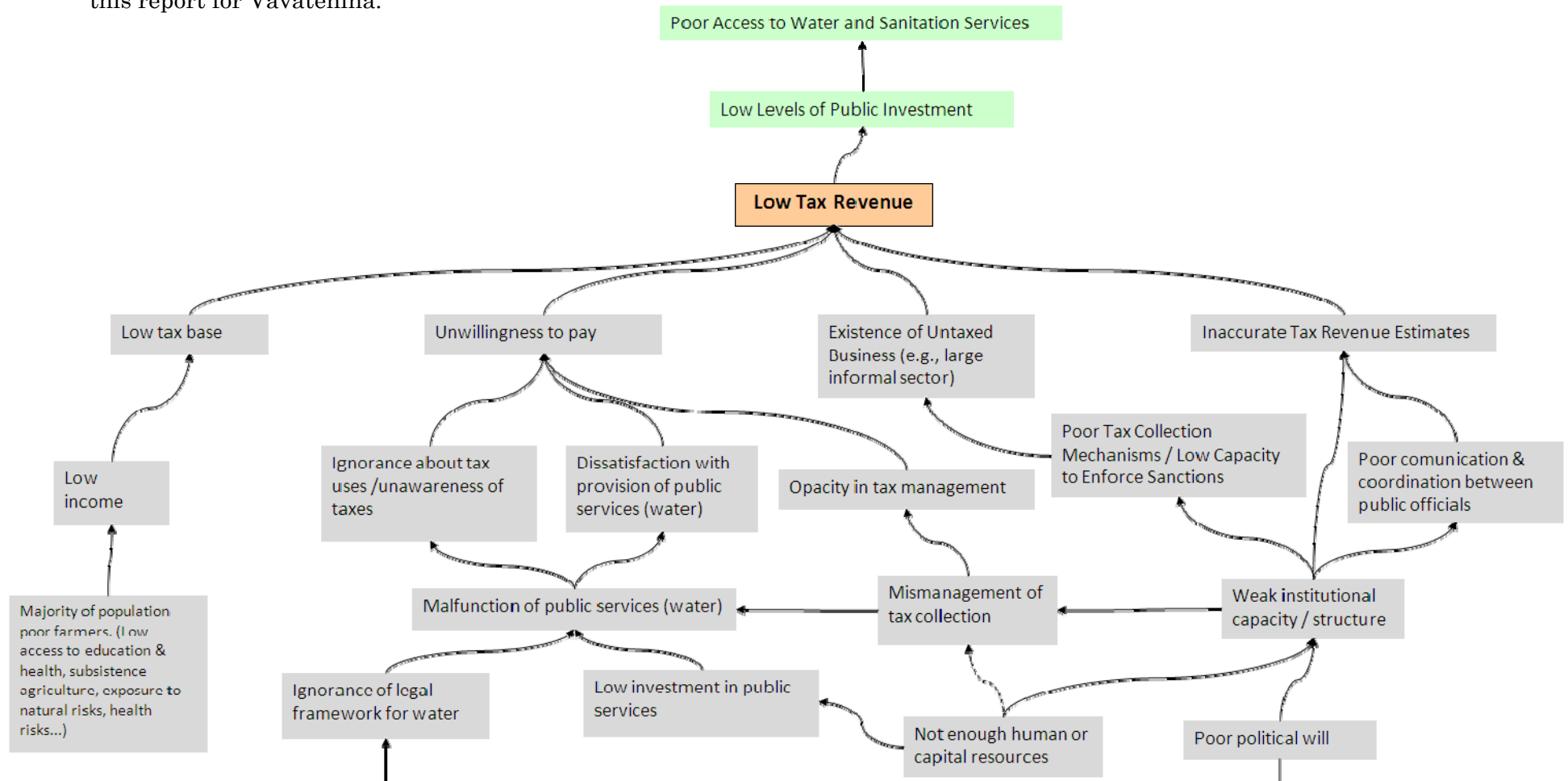
<sup>109</sup> Focus Group Interview with Farmers of Vavatenina, March 26, 2009.

<sup>110</sup> Focus Group Interview with Farmers of Vavatenina, March 26, 2009.

<sup>111</sup> Noso Barthelemy, March 24, 2009.

## Problem Tree

The problem tree reflects the logical structure of the causes leading to low tax revenue, as a central problem to be analyzed in this report for Vavatenina.



## Recommendations: Vavatenina

Therefore, it could be summarized that there are four main causes for low levels of tax revenue in Vavatenina. First, the difficulty of raising tax bases is explained by the low level of income of the majority of the local population. Second, unwillingness to pay and/or the evasion of taxes is explained by various reasons, principally the low satisfaction levels in locally provided public services, but also by low levels of transparency and citizen's poor understanding on the benefits of paying taxes. Third, the inadequacy of tax collection mechanisms or the impossibility to enforce repercussions for tax evasion are partially explained by the low human and material resources the commune has for this purpose. And finally, the low human and material capital also explains the inaccuracy with which tax revenue is calculated.

From the abstraction exercise of addressing the main “roots of problems” outlined in the problem tree above, we were able to define a certain number of key recommendations that have the potential to increase tax revenue levels in Vavatenina.

### Recommendations for Increased Local Fiscal and Nonfiscal Revenue

#### (1) Further Categorize “Other” Receipts

In 2007, nearly 25% of all locally-generated fiscal and nonfiscal revenue was classified as “other”. This is a large percentage to have no description attached; an observer can only assume that this includes such important sources of revenue as the agricultural products tax (*ristourne*) which do not appear elsewhere. In future years, the “other” category should be further broken down in the tax records to be able to remember and analyze its sources. This and other measures to increase transparency should be followed.

#### (2) Time Tax Collection during Convenient Periods for Increased Revenue Recovery



## Recommendations: Vavatenina

As per focus group members, the tax collection times often fall at inconvenient times of the year, during the hungry season when food supplies and incomes are low.<sup>112</sup> The commune can augment its receipts and recovery rates by timing tax collection with the harvest time, especially for cultivators and sellers of agricultural products. Specifically, tax collection would be best performed during the dry season, during the harvest of vanilla and cloves, and not during the rainy season.

### (3) Ease the Oversized Tax Burden on Small- to Medium-Sized Farmers

Our findings show that farmers bear the burden of multiple taxes: property tax on land (which is generally larger because of the large fields), the property tax on buildings, and the agricultural products tax (*ristourne*) if they take their product to market, and the low-level income tax.<sup>113</sup> Because the property tax on land is a pre-calculated fixed annual sum, it does not take into account the relative productivity of seasons, and the risks to production are severe. Although the commune scores a better-than-average rate on the production-risk index,<sup>114</sup> it is located in an area prone to periodic cyclone damage.<sup>115</sup> Therefore, in order to ease the tax burden on small and medium farmers, we recommend the following:

- a. Offer a subsidy to farmers with small- and medium-size plots to offset a portion of the property tax on land. This will prevent them from paying punitive amounts on land that is marginally productive.
- b. Increase the rates of the agricultural products tax (*ristourne*) by a certain percentage to cover, in total, the lost revenue from the property tax on land subsidy. This should account for fluctuations in the quality of the harvest year-to-year. In setting the level this high, during the good years, the commune will collect enough extra revenue to act as a buffer against years of bad harvests.<sup>116</sup>

<sup>112</sup> Focus Group Interview with Market Sellers of Vavatenina, March 26, 2009.

<sup>113</sup> Focus Group Interview with Farmers of Vavatenina, Madagascar, March 26, 2009.

<sup>114</sup> According to the indices contained in this volume. See Appendix II for details.

<sup>115</sup> Narisoa Andriamahefa « Réponse Local au Objectif du Millénaire » 2007.

<sup>116</sup> One concern, however, is the possibility that increasing the agricultural product tax rates on the part of the commune will encourage other actors involved in collection at the regional level (Gendarmes, etc.) to increase their take as well.

## Recommendations: Vavatenina

### (4) Raise Awareness in the Community of the Benefits of Paying Taxes

Our focus groups demonstrated a high level of awareness about tax levels and responsibilities, but a very low awareness of specific benefits of tax payment. To raise awareness in the community of the benefits of paying taxes:

- a. Call a yearly town hall when the final Administrative Account has been calculated for the previous year. Run through tax receipts and their uses in the budget, including funds from the water sector, and answer questions about the commune's fiscal performance, through signs and posters, for example.
- b. Set aside money each year for at least one commune improvement project paid for with taxpayer money--such as road rehabilitation or market construction—as opposed to using NGO donations or government transfers. Involve volunteers from the community extensively in the planning and deployment of this project, and publicize the project during and after completion with appropriate signs and announcements. For example, the interviews showed the desire for more water, sanitation, or public health projects, or the construction of a new market.
- c. Continue informing the public on where and when to pay taxes and why the tax levels are set as they are. The public would also benefit from trainings on the general benefits of local fiscal revenue as well as their fiscal duties. This could be carried out through radio announcements, town hall meetings, or posters, for example.

### (5) Increase Incentives for Agents to Collect the Most Tax Revenue

For example, consider implementing a yearly prize for the tax agent who increases recovery rates by the largest percentage. If such a consideration is already called for, it is worth implementing.

### (6) Generate Quarterly Administrative Account Updates for Better Appraisal of Recovery Rates

## Recommendations: Vavatenina

In order to better track fiscal performance, generate quarterly Administrative Account report updates instead of yearly, and distribute them among the local administration and Fiscal Center. This will show performance in different aspects of revenue recovery and highlight priorities in tax collection for future quarters. This must be accompanied by technical capacity building (discussed more fully below), so that increased information is met with better methods of interpreting this information.

### (7) **Hire More Fiscal Personnel to Improve Revenue Recovery & Management**

To manage the increased responsibilities of the property tax on land, property tax on buildings, and low-level income tax, hire more fiscal personnel and recovery agents to assist the Treasurer, Inspector, and fokontany heads in their fiscal responsibilities.

### (8) **Consider Implementing a Fee for Municipal Waste Collection**

While the study did not directly research the feasibility of implementing such a fee, evidence is encouraging. Focus groups have reported an interest in increasing sanitation levels in the commune. The team recommends conducting further research into the viability of a locally financed waste collection system, appropriate to cost requirements and citizens' willingness to pay. Before any fee is levied, however, the system must have adequate infrastructure provisions.

### (9) **Enhance Inter-organizational Coordination for Increased Budgetary Planning**

Since NGOs and other stakeholders play a significant part in development projects in the commune, consider a yearly stakeholder meeting among all contributing parties to assist with budgetary planning.

- a. Stakeholders present their action plans for the year
- b. Commune presents its development priorities
- c. Commune has an appreciation for which sectors can be covered with external financing, allowing it to free up resources for other sectors.

## Recommendations: Vavatenina

To facilitate this process, the commune should update its Communal Development Plan (*Plan Communal de Développement*, PCD).

### (10) **Continue Tax Collection with Decentralized Field Agents**

This practice appears to be successful.<sup>117</sup>

### (11) **Increase the Taxable Base of the Agricultural Products Tax (*Ristourne*)**

The regional tax center Analanjirofo should give the right to collect the agricultural products tax to Vavatenina. A permanent tax payment point throughout the year to benefit the rural commune should be placed between Vavatenina and Fenerive Est. It should especially target the agricultural products tax on cash and export products. The commune already has some agricultural products tax revenue, but should investigate other products (possibly some of added value) to which the tax could be applied.

### (12) **Prioritize the Low-Level Income Tax**

There remain many professional activities which are not considered part of the tax base of the low-level income tax—woodworkers, for example. This tax is already becoming an important part of the commune's revenue stream, so efforts should be made to enlarge the tax base by registering currently unregistered business activities, as well as ensuring their collection.

### (13) **Accelerate the Distribution of the Tax Bills where Possible**

The property taxes suffer from large information requirements before they can be assessed on taxpayers. The commune should make efforts to accelerate this process, where possible, by working closely with the regional fiscal center, completing periodic censuses that update the taxable base, and ensuring that tax agents are competent in this area.

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<sup>117</sup> Etienne Andrianarivelo, March 23, 2009.

## Recommendations: Vavatenina

### (14) Increase Fokontany Incentives for Tax Payment

The degree of voice in certain public decisions—investments, for example—should be partially reflected by each fokontany’s relative tax payment rates. This will ensure that those citizens who are able to pay their taxes will have a say in the use of these public funds.

### (15) Increase Transparency through Providing Taxpayers Proof

The simple step of showing taxpayers the amounts written on the stubs of receipts—the part that stays with the government—can go a long way to improve taxpayer confidence. Consider other steps the government can take to improve confidence in the tax system.

### (16) Respect and Support the Agricultural Sector

As the premier revenue-generating activity of the commune, the agricultural sector should be classified as the commune’s primary taxable revenue stream. As such, great care should be taken to support the agricultural sector, not to overtax the farmers, and to increase the productivity of their harvests.

## Recommendations for Improved Water Supply and Sanitation Services

### (1) Place More Recognition on the Importance of the Water Sector

The prioritization of water and sanitation as key public services should be reflected in a budget increase for this sector with a specific Fund for Communal Water and Sanitation.

### (2) Rehabilitate the Water System: Capital Investment

## Recommendations: Vavatenina

The later this rehabilitation is done, the more expensive it will be since the system is already deteriorating. This upgrade would increase people's satisfaction with the service and therefore their willingness to pay for water services, increasing the revenue from operating the water system. The upgrading of the system should consider water treatment, replace deteriorated materials and increase the number of public taps in order to increase access. Annex 6 of this report offers three different management alternatives in detail that could be considered and studied by the commune.

### **(3) Create a Management Plan for New System**

The commune should design a viable and realistic management plan to recover operation and maintenance costs prior to applying for funds to upgrade the system. The new investor will need to ensure that its investment would lead to an upgraded, extended, and sustainable system.

### **(4) Understand and Implement a Regulatory Framework**

The commune needs to understand and implement the current legal framework for water and sanitation when designing a new management plan for the water supply system. Support from state institutions should be requested (Ministry of Water or ANDEA).

### **(5) Keep the Revenue from Water in the Water Sector**

The total amount of the revenue from the water supply system must stay within the water sector to prevent further system degradation. Keep water revenue apart from other resources in the budget to be used in operation and maintenance expenditure for the system. If water revenue declined in 2008 and 2009 as expected,<sup>118</sup> then once the system is rehabilitated through external financing, the appropriate revenue must remain in the water sector.

### **(6) Review the Tariff Structure**

Once the system is upgraded, the commune should review the tariff structure. Fixed tariffs do not promote efficiency in water consumption, and even if the revenue could be easily

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<sup>118</sup> Noso Barthelemy, March 24, 2009.

## Recommendations: Vavatenina

determined a priori, the operating costs might be higher than expected if too much water is consumed. A tariff composed by a fixed amount to cover fix costs, and a variable one as a function of consumption (progressive) is preferable. This might curb nonessential consumption and ensure the consumer understands the true value of the product.<sup>119</sup> For users of public stand posts, consider implementing a price-per-bucket rate instead of a monthly rate.

- a. The team recommends that Vavatenina undertake a cost-recovery study to determine the appropriate price per bucket.
- b. The recommended rate should be voted upon through referendum by the population of the commune.
- c. Sanctions for non-payers should be determined and implemented, especially once a new system is in function.

This should be done periodically to adjust for to GDP/capita growth in the commune and inflation indexes, always controlling for affordability indicators.

### (7) Reduce Connections Costs

The commune should consider the possibility of reducing connection costs to the system. This would allow more households to apply for connections and thus lead to higher revenue and lower operating cost per connection, increasing economies of scale in operating the system since the revenue/cost ratio would increase.

## Prioritization of Recommendations

To assist policymakers and NGO implementing partners, the team has devised a matrix for determining the relative priorities of the recommendations brought forth in this report. Each potential recommendation is classified by the following characteristics: feasibility of implementation; importance to the commune's priorities; potential direct benefit (revenue)

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<sup>119</sup> Noso Barthelemy, March 24, 2009.

## Recommendations: Vavatenina

to the commune; potential indirect benefit (public opinion or other spillover effects); cost of implementation. Based on the ratings of Low, Medium, or High for each characteristic, the recommendation is given an overall priority. Note that with Costs (only), it is better for the characteristic to be Low.

Recommendation	Feasibility	Importance to Commune	Potential direct benefit	Potential indirect benefit	Cost	Overall Priority
Further Categorize “Other” Receipts	High	Low	Low	Med	Low	Med
Time Tax Collection during Convenient Periods	Med	High	High	Med	Med	High
Ease the Oversized Tax Burden on Small- to Medium-Sized Farmers	Low	Med	High	Med	High	Med
Raise Awareness in the Community of the Benefits of Paying Taxes:						
• Yearly Town Hall	High	High	Low	High	Low	High
• One Yearly Tax-sourced Development Project	Med	Med	Med	High	High	Med
• Continue Informing Public about Taxes	High	High	High	High	Med	High
Increase Incentives for Agents to Collect the Most Tax Revenue	Med	High	High	Low	Med	Med
Generate Quarterly Administrative Account Updates for Better Appraisal of Recovery Rates	High	Med	Low	High	Med	Med
Hire More Fiscal Personnel	Low	High	High	Med	High	Low
Consider Implementing a Fee for Municipal Waste Collection	Med	Med	High	Med	High	Low
Enhance Interorganizational Coordination	High	Med	Med	High	Low	High
Continue Collection with Decentralized Field Agents	High	High	High	Low	High	High
Increase the Taxable Base of the Agricultural Products Tax	Med	Med	High	Low	Med	Med
Prioritize the Low-Level Income Tax	High	High	High	Low	High	High
Accelerate the Distribution of the Tax Bills where Possible	Med	Med	High	Med	Med	Med
Increase Fokontany Incentives for Tax Payment	High	High	Med	High	Low	High
Increase Transparency through Providing Taxpayers Proof	High	Low	Low	High	Low	Med



## Recommendations: Vavatenina

Respect and Support the Agricultural Sector	Med	High	Low	High	High	Med
<b>Water and Sanitation Sector specific:</b>						
Place more Recognition on the Importance of the Water Sector	Med	High	Low	Med	High	Med
Rehabilitate the Water System: Capital Investment	Med	High	High	High	High	High
Create a Management Plan for New System	High	High	High	High	Low	High
Understand and Implement the Regulatory Framework	Med	Med	Med	Med	Low	Med
Keep the Revenue from Water in the Water Sector	Low	High	High	Med	High	Med
Review Tariff Structure	Med	High	Med	Med	Low	Med
Reduce connections costs	Low	High	High	Med	High	Low

# V. Case Study: Ankadikely Ilafy

## Background

Ankadikely Ilafy is a rural commune 8 kms north of the Madagascar's capital, Antananarivo. It is located in the region of Analamanga and in the district of Avaradrano.<sup>120</sup> Ankadikely Ilafy is the largest rural commune of 2<sup>nd</sup> category in Madagascar, meaning the commune relies on a local Inspector (*percepteur*) as opposed to a deconcentrated Treasury representative to manage public finances. Although classified as a rural commune, Ankadikely Ilafy is a rapidly growing peri-urban environment.

This commune is comprised of 17 fokontany.<sup>121</sup> In these 17 fokontany, however, there is diversity within the physical environment, main income-generating activities, and proximity to the capital that all affect the potential for development.<sup>122</sup> Relative to other rural communes, Ankadikely Ilafy is more developed due to the proximity of the capital and presence of industries as opposed to an agriculture-based economy. In fact, Ankadikely Ilafy ranks significantly higher than the national average of poverty (as defined the percentage of low, medium, and rich people in the population), infrastructure, and risks to production (as defined by natural disasters, disease, crime, and presence of military).<sup>123</sup>

## Snapshot Profile:

**Table V: Demographics (As of 2009)**

Population	86,270
Growth Rate	2.4%
Population Density	2141 inhabitants / km <sup>2</sup>
Mortality Rate	2.74%

<sup>120</sup> Plan Communal de Développement, 2005, p. 5-6.

<sup>121</sup> Jean Ramaholison, Responsable Administratif et Financier, interview by authors, Ankadikely Ilafy, Madagascar, January 12, 2009.

<sup>122</sup> Plan Communal de Développement, 2005, p. 2.

<sup>123</sup> Cornell Survey, 2001. See appendix II indices

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Source: Plan Communal de Développement, 2005, p. 7-9.

**Table VI: Age Breakdown (As of 2008)**

Age Group	Number of population
0 - 5 years	6,559
6-20 years	24,705
21-37 years	25,361
38-50	20,084
50+	9,561
Total	86,270

Source: Plan Communal de Développement, 2005, p. 9.

## Economy

Main sectors: Economic activity in Ankadikely Ilafy spans several sectors. The majority of residents (53%) are involved in the service sector.<sup>124</sup> Industries present in Ankadikely Ilafy include agriculture, timber, textile/clothing, plastics and electric. As of 2003, the textile industry employs the greatest number of people.<sup>125</sup> Only 22% of the population is employed in agriculture.<sup>126</sup>

Dominant agriculture: Grains, followed by tubers, are the largest agricultural products in terms of production (tons). Rice production represents 70% of the total cultivated area.

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<sup>124</sup> Cornell survey, 2001.

<sup>125</sup> Plan Communal de Développement, 2005, p. 15.

<sup>126</sup> Cornell survey, 2001.

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**Table VII: Agriculture (As of 2004)**

Crop Categories	Principal Products	Surface Area under Cultivation(ha)	Production (tons)
Grains	Paddy	602	1,506
Vegetables	Dried beans, Peas, Bambara, Voanjobory	32	62
Tubers	Potatoes, Cassava, Sweet potatoes, Saonjo	188	1,318
Gardening (vegetables)	Breda variety cabbage, Tomatoes, Carrots, Cucumbers, Marrows	30	460
Temporary Crops	Peanuts	6.5	5

*Source: Plan Communal de Développement, 2005, p. 10.*

## Water Provision

JIRAMA is the primary water service provider in Ankadikely Ilafy. Over the years, the water system comprised of both private and public taps has grown, but today it is estimated that only 7% of residents have permanent access to clean water.<sup>127</sup> And, because the JIRAMA network does not reach the entirety of the city, there are some neighborhoods that do not have any public taps.

JIRAMA sets its tariff rates, which are the same across all of Madagascar.<sup>128</sup> For low levels of consumption by private tap users, and for all levels of consumption by the commune (in public buildings, e.g.), the price is 400Ar per cubic meter.<sup>129</sup> Higher levels of consumption are charged higher rates, but these are usually intended for customers with industrial needs. Taxes are applied to these rates, which figure importantly for the

<sup>127</sup> Direction de la Planification et Stratégie, Antananarivo. This figure is an average for all communes surrounding the capital.

<sup>128</sup> Chef d'Agence JIRAMA Analamahitsy, interview by Honoré Mamindray Hafany, Analamahitsy, Madagascar, April 4, 2009.

<sup>129</sup> In fact, there are two tranches of consumption which get billed at different rates. However, the tranche with a higher rate is usually reserved for nonpublic industry.

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commune and are discussed below in the section titled "JIRAMA and the Use of Water Taxes."

Users of public taps face different payment structures. Each public tap is run by a manager, elected by the inhabitants of the concerned fokontany, who sets the price -per-bucket that ranges from 20Ar to 50Ar among different taps.<sup>130</sup> The revenue from these small payments is divided as follows:  $\frac{1}{4}$  is kept by the tap manager as a salary;  $\frac{1}{4}$  stays within the fokontany in which the tap is located to provide for maintenance of the water system; the final  $\frac{1}{2}$  goes to the commune to pay for the water consumption (which is billed at the aforementioned rate of 400Ar per cubic meter). No additional taxes or surtaxes are applied to public tap fees.<sup>131</sup> The range in the price-per-bucket of water is disconcerting because it allows for exploitation of the poor. Also, the citizens of Ankadikely Ilafy stated that the hours of operation at public taps were neither sufficient nor uniform across all public taps.

Through interviews with eight residents with different occupations (such as street vendor, farmer, and fisherman), the team attempted to understand the current satisfaction with and willingness to pay for water services. Most of the respondents used public taps, and generally reported dissatisfaction with the operating hours of the taps (which results in long lines) and the insufficient number of public taps. However, the quality and price of water was generally acceptable to the respondents, although one interviewee quipped that water should be free.<sup>132</sup> One of the respondents used a private tap and noted satisfaction with the quality and price of the water.

In Ankadikely Ilafy, it is the responsibility of the public tap manager to collect money for all water consumption and pay the water bill to the commune at the end of each month. Sometimes the entire bill cannot be paid, or is paid late, because some households pay their consumption per month. One tap manager advocated for maintaining the current price because he has observed that not only does the population want water to be free, but that

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<sup>130</sup> Jean Ramaholison, Responsable Administratif et Financier, interview by Lovy Rasolofomanana, Honoré Mamindray Hafany and Ernest Randriarimalala, Ankadikely Ilafy, Madagascar, March 19, 2009.

<sup>131</sup> Jean Ramaholison, March 19, 2009.

<sup>132</sup> Interviews with taxpayers of Ankadikely Ilafy, interviews by Honoré Mamindray Hafany and Ernest Randriarimalala, Ankadikely Ilafy, Madagascar, March 20, 2009.

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there is community solidarity in helping each other to pay for water when individuals cannot afford it.<sup>133</sup> Additionally, consumption at the public tap decreases during the rainy season when residents use rain water for consumption, and the opposite is true in the dry season.<sup>134</sup> According to this public tap manager, the profit is marginal. The manager receives 25% of sales on water, and water sales can vary anywhere between 40,000-50,000Ar/month.<sup>135</sup>

### Sanitation Services

The issue of sanitation appeared frequently during interviews in the commune. The municipality maintains 24 garbage bins in its jurisdiction to collect household waste, and relies upon several commune employees to use their personal vehicles to evacuate the waste. One official stated that this system requires 60% of locally generated revenue to maintain operation.<sup>136</sup> However, on the whole there is no master plan for sanitation, and a system of waste water removal is not in place. Plans to implement more sanitation projects have not yet been formed.<sup>137</sup>

## Tax Overview

### Citizen Perspectives on Payment of Taxes

Interviews with taxpayers of Ankadikely Ilafy showed perspectives on the payment of taxes, areas of success in tax collection, and highlighted common areas of concern. Many taxpayers explained that they paid taxes out of obligation to abide by the law, out of habit, to avoid penalties, and for expected benefits. Many of the interviewed taxpayers expressed the sentiment that taxes were necessary for the development of the commune and country. These residents specifically mentioned the provision of public services, and the needs of low-income people.<sup>138</sup> Many people also attributed their motivation for paying taxes to the

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<sup>133</sup> Liva Harisoa, Public Tap Manager, interview by Honoré Mamindray Hafany, Ankadikely Ilafy, Madagascar, April 2, 2009.

<sup>134</sup> Liva Harisoa, April 2, 2009.

<sup>135</sup> Liva Harisoa, Public Tap Manager, April 2, 2009.

<sup>136</sup> Jean Ramaholison, March 19, 2009.

<sup>137</sup> Jean Ramaholison, March 19, 2009.

<sup>138</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

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benefits that they had heard would come. In spite of these expectations, the vast majority of residents interviewed stated that they had witnessed little tangible change in their community. They also offered specific examples of improvements they would like to see with their tax dollars. For example, a fruit and vegetable seller discussed the construction of a new market and other residents pointed to the poor quality of local roads.<sup>139</sup> Many taxpayers stated that the low quality of public infrastructure discouraged them from paying taxes.

In general, the interviews showed that taxpayers have a solid understanding of how to pay taxes, and the amount of taxes that they pay. They also had an accurate sense of which businesses pay the most taxes. Despite the consolidation of some taxes in the 2008 tax reform, some taxpayers felt that there were too many taxes and that several taxes should be consolidated into one low-level income tax.<sup>140</sup> Most of the people interviewed felt that the tax rate and the amount of taxes that they bore were high, but manageable. However, many felt that the amount of taxes paid was too great for the small benefits that it produced.<sup>141</sup>

A desire among taxpayers for greater transparency and knowledge of where tax money is spent was also expressed by those interviewed in Ankadikely Ilafy. The citizens described the way their tax money was used in a general way, but did not give examples of specific projects that were financed by tax dollars. The taxpayers also did not accurately describe the flow of tax money.<sup>142</sup> Additionally, many of the people interviewed stated that government officials benefit most from tax revenue. One respondent described a discriminatory tax policy, or corruption, related to the property taxes on land and buildings. They stated that in regards to these two taxes, if you have a poor relationship with the commune officials you will pay more, whereas a good relationship with the commune officials will result in a lower tax payment. Although not all respondents directly mentioned corruption, this was clearly a concern for many citizens.<sup>143</sup>

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<sup>139</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

<sup>140</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

<sup>141</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

<sup>142</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

<sup>143</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

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The interviews with taxpayers of Ankadikely Ilafy also highlighted an important disconnect between the citizens' priorities for their commune's development and the activities implemented by the government. One citizen stated that there is no consensus between the commune officials and the taxpayers.<sup>144</sup>

Interviews with local tax collectors of Ankadikely Ilafy illustrated several common challenges to tax collection. First, the tax collectors expressed that taxes were hard to collect if the associated services are poor. For example, a tax collector of parking rights stated that bus drivers sometimes refuse to pay taxes because the roads are poorly maintained.<sup>145</sup> A tax collector of market tickets stated that that tax would be easier to collect if a new market were constructed for the merchants.<sup>146</sup> Second, interviews with tax collectors showed that certain taxes are more difficult to collect by season, as well as the difficulties of raising tax rates. The tax collector of market tickets stated that it is hardest to collect the tax during the rainy season when the market sellers have a hard time selling their goods.<sup>147</sup> All three of the tax collectors interviewed stated that the tax rates should not be increased. In the opinion of one tax collector, increasing the tax rates (especially that of the market ticket) could even lead to a protest.<sup>148</sup> Another area of concern is the low salary of tax collectors. Although they are civil servants, one earned less than one dollar/day. Another tax collector admitted to keeping tax money for himself (although he did suffer consequences of this action).

### Principal Taxes

Interviews with officials of Ankadikely Ilafy highlighted the successes of local tax collection, the most important taxes for the commune, and the commune's plans to increase tax revenue. According to local officials in 2009, the locally generated tax revenue represented

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<sup>144</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

<sup>145</sup> Bertrand Rafanomezantsoa, Tax collector, interview by Honoré Mamindray Hafany, Ankadikely Ilafy, Madagascar, April 2, 2009.

<sup>146</sup> Honore Randriamifidimana, Tax collector, interview by Honoré Mamindray Hafany, Ankadikely Ilafy, Madagascar, April 2, 2009.

<sup>147</sup> Honore Randriamifidimana, April 2, 2009.

<sup>148</sup> Honore Randriamifidimana, April 2, 2009.



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60% of the commune's budget.<sup>149</sup> According to 2007 commune data, locally generated fiscal and non fiscal revenue comprised 89% of all commune receipts.<sup>150</sup> The commune of Ankadikely Ilafy also receives central government transfers, which comprise 6% of the commune's total budget.<sup>151</sup>

The most significant tax for the commune of Ankadikely Ilafy is the property tax on buildings. According to the officials of Ankadikely Ilafy, the property tax on buildings is the largest tax receipt for the commune.<sup>152</sup> In 2007, the property tax on buildings was 49% of the total budget, and this tax was 74% of all local fiscal revenue.<sup>153</sup> Additionally, it will likely continue to be an important source of tax revenue for the commune because of the rapid rate at which this area is expanding. New buildings proliferate throughout Ankadikely Ilafy. The property tax on buildings is the largest source of tax revenue in this commune because of the many industrial enterprises, hotels, and trading zones.<sup>154</sup> A 2008 census found 9,003 taxpayers for the property tax on buildings.<sup>155</sup> And in 2008, the commune collected a total of 263 (million) Ar with a payment rate of 49.5%.<sup>156</sup>

In Ankadikely Ilafy, the property tax on land has the potential to generate significant revenue for the commune. In 2007, the property tax on land generated 0.5% of the total budget of Ankadikely Ilafy and 1% of all local fiscal revenue.<sup>157</sup> According to one official, this tax revenue has been used to finance offices in the fokontany, street lighting, agricultural activities, roads and public taps.<sup>158</sup> However, land titling in Ankadikely Ilafy is low and faces several challenges. Today, 70% of the land in the commune is not titled. The commune lacks a system of land registration to facilitate the ownership process and there are many legal problems that aggravate the situation.<sup>159</sup>

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<sup>149</sup> Charles Rakotondraso, Service de Recouvrement, interview by Lovy Rasolofomanana, Honoré Mamindray Hafany and Ernest Randriarimalala, Ankadikely Ilafy, Madagascar, March 19, 2009.

<sup>150</sup> Jean Ramaholison, January 12, 2009.

<sup>151</sup> Jean Ramaholison, January 12, 2009.

<sup>152</sup> Jean Ramaholison, January 12, 2009.

<sup>153</sup> Jean Ramaholison, January 12, 2009.

<sup>154</sup> Jean Ramaholison, March 19, 2009.

<sup>155</sup> Charles Rakotondraso, March 19, 2009.

<sup>156</sup> Charles Rakotondraso, Service de Recouvrement, interview by authors, Ankadikely Ilafy, Madagascar, January 12, 2009.

<sup>157</sup> Jean Ramaholison, January 12, 2009.

<sup>158</sup> Charles Rakotondraso, March 19, 2009.

<sup>159</sup> Charles Rakotondraso, March 19, 2009.

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The property tax on land and the low-level income tax both have the potential to generate a great deal of revenue for the commune. The censuses for both of these taxes are perpetually outdated, preventing timely assessment and collection of these taxes. The commune has recently engaged the services of FIBTAMA<sup>160</sup> (a municipal organization) to improve the quantity of fiscal receipts. And, a current census for the property tax on land is already underway.<sup>161</sup> The potential revenue from the property tax on land is limited, however, because only a small percentage of the land in Ankadikely Ilafy is titled. Collection of the low-level income tax is low due to the outdated census of businesses and the predominance of the informal sector. However, with the dominance of the service sector, this tax is an important potential source of revenue for this commune. Fifty-three percent of residents work in the service sector and many of these people's income is within the taxable income bracket for the low-level income tax. Ankadikely Ilafy commune officials currently point to the lack of personnel as a constraint to their plan of increasing the property tax on land as well as the low-level income tax.<sup>162</sup> The lack of personnel contributes to the retardation of issuing bills, monitoring payments and carrying out the collections procedures.

The commune has successfully increased tax revenue through decentralized collection methods; sending agents to the field to register the tax payers and collect taxes. Additionally, the commune has increased awareness on tax payment by making efforts to post signs in the fokontany.<sup>163</sup> However, the interviews with commune officials revealed a generally low understanding among local officials of tax policy.

The current system of nonpayment penalties is a weak aspect of the tax collection process. The formal process for nonpayment penalties consists of three consecutive notifications. First, the delinquent taxpayers are sent a reminder to pay. If the taxpayer does not pay, they are called to the payment center (may vary according to the tax) and they are then responsible to pay the fees for the notices, in addition to the principle tax money owed. At

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<sup>160</sup> Fikambanan'ny Ben'ny Tanana Manodidina an'Antananarivo (FIBTAMA) is an association of mayors in the cities surrounding Antananarivo.

<sup>161</sup> Charles Rakotondraso, March 19, 2009.

<sup>162</sup> Jean Ramaholison, March 19, 2009.

<sup>163</sup> Randrinsigaona Tsiry, Adjoint Chef Fokontany, interview by authors, Ankadikely Ilafy, Madagascar, January 13, 2009.

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the third notice and call to the payment center, the taxpayer is told all of the penalties that nonpayment will incur. Sometimes a consensus can be reached at the third convocation, which often includes a payment plan. Although this formal process for nonpayment penalties exists, much of these penalties are not systematically applied because of the political context of Madagascar and low staffing and management capacity at the local tax collection centers. Instead, there exists a more ad hoc process of convocations. Even after late fees are applied, enforcement remains weak because the likelihood of legal ramifications is generally low.

### JIRAMA and the Use of Water Taxes

JIRAMA, as the primary water provider in Ankadikely Ilafy, is involved in the collection of taxes on water. In addition to the metered rate, a tax and surtax are applied to the bills of private tap users. Such additional charges are regulated by law and cannot exceed 10% of the bill amount,<sup>164</sup> and the revenue of both taxes is meant to return to the budget of the commune. In fact, the rates of these two taxes are set by the commune (mayor and communal council). Each tax is established for a specific purpose. The surtax is for the extension of water infrastructure (public taps, washing areas, public restrooms). The tax is to be used by the commune to pay for the consumption of water at public taps and communal buildings.<sup>165</sup> The combined surtax and tax comprise what is commonly referred to as the “communal works fund.” According to an official at the national level of JIRAMA, these two taxes on the private water bills are paid to the commune in accordance with this agreement.<sup>166</sup>

Despite this official agreement, the system of investment and transfer of funds differs in practice. A local representative of JIRAMA explains that JIRAMA does not transfer any funds gained by the commune’s surtax for infrastructure investments to the commune, but rather uses those funds to make such investments.<sup>167</sup> However, representatives of the

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<sup>164</sup> Ministère du Budget et du Développement des Provinces Autonomes and Ministère de l’Energie et des Mines. Instruction Interministerielle No. 001 | MBDPA-MEM | SG | DG. August 20, 1998.

<sup>165</sup> Jules Razafimandimby, Directeur de la planification strategique de la JIRAMA, interview by Mihary Mbolamamy, Andravoahangy, Madagascar, March 24, 2009.

<sup>166</sup> Jules Razafimandimby, March 24, 2009.

<sup>167</sup> Chef d’Agence JIRAMA, April 4, 2009.

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commune of Ankadikely Ilafy stated that the commune has never seen any benefits of the “communal works fund,” but rather that these funds have just been retained by JIRAMA.<sup>168</sup> Additionally, the amount of back taxes (taxes and surtaxes) that JIRAMA owes to the commune is quite significant.<sup>169</sup> The commune has attempted to manage the situation at least once before by inquiring to the Direction of JIRAMA about the status of the taxes they are owed (*Ordre de Prelevement*).

JIRAMA in Ankadikely Ilafy currently fails to recuperate its own operating and maintenance costs,<sup>170</sup> and it is possible that they believe they must use this tax revenue for that purpose. However, this is inappropriate, and diminishes the development capacity of the commune. A more appropriate response would be, after upgrading the system to ensure a good service is offered, to raise water tariff levels, which would serve both to ease excess total demand for water and raise total revenue (including tax and surtax revenue), assuming consumer demand is somewhat inelastic to price.

Additionally, taxes (or tariff revenues) that are raised at public water taps do not stay in the water/sanitation sector. This revenue is used by the commune to pay the electricity bills of public buildings.<sup>171</sup> Another cause for concern was the generally low understanding among commune officials of the Water Code.

According to a local official of Ankadikely Ilafy, the water sector cannot play a major role in increasing local tax revenue. He explains that it is hard to tax water because water provision itself is still deficient in some areas. In his opinion, there needs to be a greater emphasis on expanding the water line and increasing the number of public tap stands.<sup>172</sup>

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<sup>168</sup> Jean Ramaholison, March 19, 2009.

<sup>169</sup> This fund is worth about 60% of the commune’s operating budget.

<sup>170</sup> Before 2002, for example, 80% of JIRAMA’s operating budget was financed by subsidies from the state and other actors. Similar problems exist today.

Chef d'Agence JIRAMA Analamahitsy, April 4, 2009.

<sup>171</sup> Jean Ramaholison, March 19, 2009.

<sup>172</sup> Jean Ramaholison, March 19, 2009.

## SWOT Analysis

The findings discussed above were synthesized here and structured in order to highlight the strengths, weaknesses, opportunities and threats of generating revenue from tax collection in Ankadikely Ilafy. This SWOT analysis helps to visualize the main challenges of improving tax revenue in this commune.

Strengths	Weaknesses
<ol style="list-style-type: none"> <li>1) The commune (at least the finance officer) is aware of the need to raise local tax revenue and some measures have been taken already.<sup>173</sup></li> <li>2) Democratic process of budget design (by the commune council).</li> <li>3) Perception of the need to collect taxes is present. People seem to be aware of this necessity.<sup>174</sup></li> <li>4) Reinforcement of the process of improving tax revenue from the advice of consultants: FIBTAMA.<sup>175</sup></li> <li>5) The current system of cross-subsidy to pay for the water system increases the potential of poorer dwellers to afford access to safe water. This system seems to be well accepted by the population.<sup>176</sup></li> </ol>	<ol style="list-style-type: none"> <li>1) Weak enforcement of JIRAMA-Commune water tax agreement.<sup>177</sup></li> <li>2) The commune's inability to estimate tax revenue in advance. This constrains the planning processes.</li> <li>3) The specific budget expenditure on solid waste collection is not covered by any specific tax.</li> <li>4) The property tax on buildings has a very low payment rate (49.5%).<sup>178</sup></li> <li>5) Property Tax on Land: <ol style="list-style-type: none"> <li>5.1 Lacks adequate system of registration</li> <li>5.2 Lacks sufficient payment opportunities (1 window) <sup>179</sup></li> </ol> </li> <li>6) Low tax base: 22% of the population are subsistence farmers. Low levels of income leads to low capacity to raise taxes. <sup>180</sup></li> </ol>

<sup>173</sup> Jean Ramaholison, March 19, 2009.

<sup>174</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

<sup>175</sup> Charles Rakotondraso, March 19, 2009.

<sup>176</sup> Charles Rakotondraso, March 19, 2009.

<sup>177</sup> Charles Rakotondraso, March 19, 2009.

<sup>178</sup> Charles Rakotondraso, March 19, 2009.

<sup>179</sup> Jean Ramaholison, March 19, 2009.

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	<p>7) People already perceive that there is not enough return on tax payment in the form of public investment.<sup>181</sup></p> <p>8) Poor regulation of water pricing at the public taps. This results in people having to pay a high price for water at certain public taps, leading some to collect water from unprotected water sources, and causing total revenue for the water system to decline (assumption).<sup>182</sup></p> <p>9) There is evidence that some residents feel that water should be free. This feeling might cause them to pay less or even to avoid payment.<sup>183</sup></p> <p>10) Weak capacity to enforce repercussions against tax evasion.<sup>184</sup></p>
<p><b>Opportunities</b></p> <p>1) The process of reform going on at national level</p> <p>1.1 Possibilities to compare performance with other communes.</p> <p>1.2 Since neighboring communities might be applying similar measures, opportunities for evasion decrease.</p> <p>1.3 National fund for transfers specifically for the decentralization process.</p>	<p><b>Threats</b></p> <p>1) Further deterioration of the water supply system and other public services. This could provoke public protests; people could stop paying for water services if they feel they are not receiving the quality of service they expect.<sup>186</sup></p> <p>2) Lack of regulation in pricing at the public taps could lead to increased discontentment among certain segments of the population (current evidence of people paying 8 % of income with bad quality service).<sup>187</sup></p>

<sup>180</sup> Plan Communal de Developpement, Ankadikely Ilafy, 2005.

<sup>181</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

<sup>182</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

<sup>183</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

<sup>184</sup> Charles Rakotondrasoa, Service de Recouvrement, March 19, 2009.

<sup>186</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

<sup>187</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

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<ul style="list-style-type: none"> <li>2) Payment rate of property tax on buildings can be increased considerably—up to 70% from current levels.</li> <li>3) External transfers from NGOs to improve certain services might include the water system, and these improvements might increase the people's willingness to pay.</li> <li>4) Expansion of the city of Antananarivo might enhance growth (in all senses: urbanization, economic growth) in Ankadikely Ilafy. New buildings are being constructed, increasing revenue potential for the property taxes on buildings. Also, economic growth could lead to increased revenue potential for the low-level income tax.<sup>185</sup></li> <li>5) The creation of cooperatives of farmers can increase their capacity to pay taxes collectively.</li> </ul>	<ul style="list-style-type: none"> <li>3) Vulnerability to climate (cyclones) and other economic downturns that could decrease local incomes and capacity to pay taxes.<sup>188</sup></li> <li>4) Lack of support from central government (if extra resources are needed, for instance, to increase local tax revenue).</li> <li>5) Decentralization might lead to increasing inequalities among communes. The threat remains of capital evasion if taxes are not applied uniformly across communes, creating competition among communes to attract capital.</li> <li>6) Rapid growth might lead to chaos in tax collection if the system is not rapidly adapted to new socio economic structures.<sup>189</sup></li> <li>7) Low levels of infrastructure in the commune lead to low attractiveness of investment, which could have potentially increase economic activity and tax collection (vicious cycle of threat and weakness)<sup>190</sup></li> </ul>
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The SWOT analysis shows evidence of administrative underperformance in tax collection (weaknesses 4, 5, 8, 10) as well as certain serious threats that, if not controlled, could potentially increase the risk of even lower tax revenue (threats 2, 5, 7). However, there are still opportunities and strengths that should be seriously considered when proposing recommendations to improve local tax collection (opportunities 1, 4, and all the strengths).

<sup>185</sup> Plan Communal de Développement, Ankadikely Ilafy, 2005.

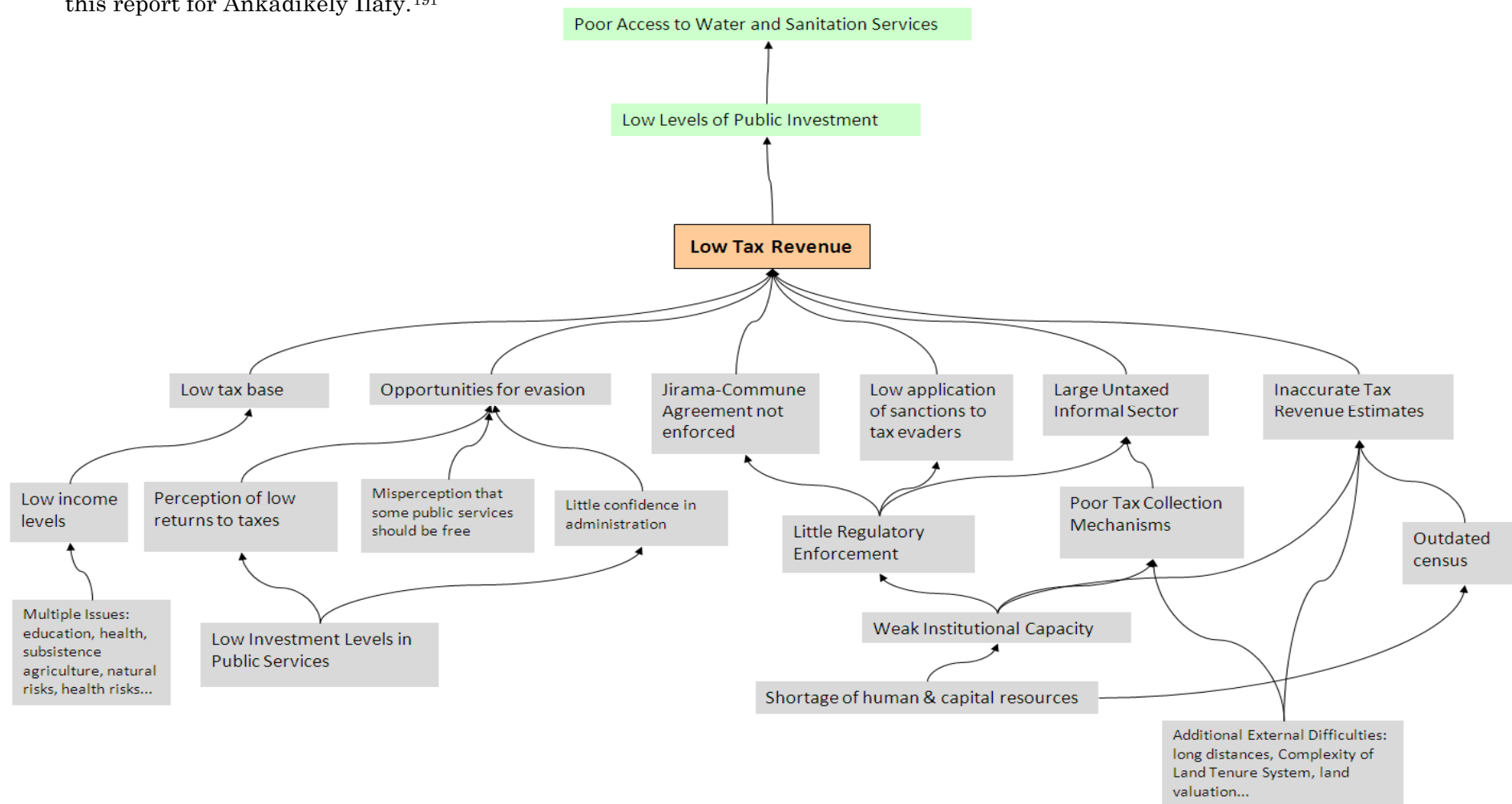
<sup>188</sup> Plan Communal de Développement, Ankadikely Ilafy, 2005.

<sup>189</sup> Plan Communal de Développement, Ankadikely Ilafy, 2005.

<sup>190</sup> Interviews with taxpayers of Ankadikely Ilafy, March 20, 2009.

## Problem Tree

The problem tree reflects the logical structure of the causes leading to low tax revenue, as a central problem to be analyzed in this report for Ankadikely Ilafy.<sup>191</sup>



<sup>191</sup> The team used information from interviews, collected documents and data, and the distilled SWOT to inform the creation of the problem tree.



## Recommendations: Ankadikely Ilafy

For Ankadikely Ilafy, we found some similar reasons to Vavatenina for the low levels of tax collection. For example, people's perception of their tax returns is low, thus increasing their unwillingness to pay. Also, a lack of human and capital resources is a key cause of underperformance in tax collection. And, we have also found evidence in Ankadikely Ilafy that residents feel that water should be provided for free. However, there are also some important differences. In Ankadikely Ilafy, the underinvestment in the water sector is the responsibility of the local government and JIRAMA, and specifically related to the incapacity of these parties to enforce the agreements they have established.

Again, the analysis of the problem tree and SWOT led the team to formulate a series of key recommendations that will lead to increased tax collection in Ankadikely Ilafy.

### Recommendations for Increased Local Fiscal and Nonfiscal Revenue

#### 1) Engage FIBTAMA to Investigate Methods to Maximize Recovery of the Low-level Income Tax

The commune has opportunities for increased revenue from the low-level income tax due to the recent tax reforms, and the high levels of income in the commune. The commune should engage FIBTAMA in consultation with the Fiscal Center of Antananarivo (its nearest Fiscal Center) to evaluate the best way to achieve maximum collection of this tax. There remain many professional activities that are not considered part of the tax base of the low-level income tax—woodworkers, for example. Efforts should be made to enlarge the tax base, by registering currently unregistered business activities, as well as ensuring their collection.

#### 2) Before Changing Tax Rates, Focus on Maximizing Collection at Current Rates

The system of fiscal decentralization is still very new in Madagascar, and communes are unaccustomed to performing as a tax authority. As such, the initial focus should be on developing the commune's capacity to collect taxes at their current rates before

## Recommendations: Ankadikely Ilafy

troubling itself with setting the optimal rates. Increasing the technical capacity to collect and manage tax revenue will also build capacity for setting optimal tax rates.

### 3) **Accelerate Land Titling to Increase the Tax Base for the Property Tax on Land**

Titling of land should be accelerated to decrease the number and frequency of land disputes. In so doing, the tax base for the property tax on land will increase.

Furnishing more means of registration (e.g., providing more than one window) will also facilitate this process.

### 4) **Consider Hiring More Personnel for Tax Collection**

The team believes that hiring more personnel for tax collection, especially to identify and follow taxpayers of the property tax on land, property tax on buildings, and low-level income tax, could possibly generate more than enough new revenue to cover the extra costs associated with more personnel. To ensure that there are efficiency gains to be achieved with more personnel, the commune should examine:

- a. The current payment rate of the low-level income tax
- b. The unpaid portions of all three taxes
- c. The feasible amount of extra revenue that could be obtained by each new tax officer
- d. The cost of each new tax officer

Furthermore, the additional personnel could assist in regularizing and strengthening the commune's enforcement systems which, as noted, are currently weak.

### 5) **Better Predict Public Revenue**

The commune should focus on better predicting public revenue to facilitate more precise planning for the following year's investments.

# Recommendations: Ankadikely Ilafy

## 6) Enhance Transparency in Public Finance Management

To gain the trust of the people in tax payment, the commune should be more transparent both in its collection of public finances and its management of public spending. For example:

- a. A copy of the budget, difficult to locate at the time of research, should be a readily-available public document.
- b. The commune should undertake sensibilizations about the different taxes, their budgetary uses, and how they help the commune advance.  
Additionally, general information about the benefits of taxation would be of use to the population. Such sensibilizations could take place in person, on the radio, or in print media. Alternatively, the commune could consider a “Tax Month” in which public duties are highlighted, or a “Tax Fair” in which games and activities encourage the public to think about their civic responsibilities.
- c. When building and completing public projects, install placards demonstrating the importance of local public finance in its construction. To further publicize these projects, the commune should post photos outside its administrative building to document the benefits of tax income. In brief, link tax payments with improved public services, which in turn will maintain or increase the population’s willingness to pay taxes.
- d. As mentioned, citizens felt a disconnect between budgetary activities and their priorities for the development of the commune. For example, interviews revealed preferences for improving roads and market infrastructure, among other projects that have yet to be implemented. To bridge this gap, increase the participatory nature of budgeting to ensure that popular development activities are prioritized.
- e. Institute a quarterly or yearly public forum to discuss tax receipts and their budgetary uses. The commune could also issue quarterly reports highlighting the state of tax collection and utilization.

# Recommendations: Ankadikely Ilafy

## 7) **Continue Enforcement against Corrupt Practices**

The commune should continue its enforcement and sanctioning of civil servants who are responsible for the misappropriations of public funds. The commune should also furnish a box for placing anonymous complaints and tips about corrupt acts of local officials; once put in place, the box should be publicized through channels such as radio or public postings.

## 8) **Strengthen the Awareness of Tax Evaders**

Tax officials should be more aware of who is not paying their taxes. Recommendations to improve the awareness of the administration in this regard include: performing monthly updates on the state of unpaid taxes; dividing unpaid taxes by type and fokontany; computerizing all tax records to the extent possible.

## 9) **Crack Down on Illegal Construction**

The rural municipality of Ankadikely Ilafy is located in the periphery of Antananarivo where there is much migration and new construction of houses. Thus, municipal officials should prioritize the collection of taxes on wealth, in particular the two property taxes. All new buildings in the commune should have a permit to build in order to facilitate the identification of taxable wealth. Moreover, the building permit is a way for the municipality to increase its sustainable tax revenues. The municipality should take very firm action against all illegal construction.

## 10) **Increase Fokontany Incentives for Tax Collection**

The degree of voice in certain public decisions—investments, for example—should be partially reflected by each fokontany's relative tax repayment rates. This will ensure that those citizens who are able to pay their taxes will have a say in the use of these public funds.

## 11) **Accelerate the Distribution of the Tax Bills Where Possible**

## Recommendations: Ankadikely Ilafy

The property taxes suffer from large information requirements that delay the assessment of these taxes on taxpayers. The commune should make efforts to accelerate this process, where possible, by working closely with the regional fiscal center, completing periodic censuses that update the taxable base, and ensuring the tax collection agents are competent in this area.

### Recommendations for Improved Water Supply and Sanitation Services

#### 1) Enforce JIRAMA - Commune Water Tax Agreement

The expansion of the water network has suffered from the lack of enforcement of the JIRAMA - commune water tax agreement. The commune has not received in recent memory the tax and surtax revenue, collected by JIRAMA, which are allotted to the commune by law.<sup>192</sup> As such, JIRAMA must sit down with the commune to determine to what uses this public revenue is to be allocated. Taking into account that JIRAMA has just received a credit in the amount of € 47 million from the European Investment Bank in March 2008 for a water project in the city of Antananarivo and its surroundings including Ankadikely, the commune should apply for the extension of the water system on currently uncovered areas to JIRAMA. More specifically, the commune should apply for a greater number of public taps, more hours of service, and other infrastructure investments. Within this general recommendation the commune should also take into account that:

- a. The tax revenue is for use as the commune sees fit in its development priorities, but some suggested interventions are:
  - i. Expanding the network of public taps, especially in underserved areas (several citizens interviewed cited a paucity of public taps).

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<sup>192</sup> Jean Ramaholison, March 19, 2009.

## Recommendations: Ankadikely Ilafy

ii. Reinforcing and expanding the canal system for grey water evacuation (cross-subsidy). There is no good sewage system, currently, nor is one planned.<sup>193</sup>

b. The water tax revenue should remain separate in the budget for water & sanitation purposes, to ensure consistent investment in infrastructure over time.

### 2) Give the water sector the importance it deserves

This should be reflected in a budget increase for this sector, funded by same-sector revenues. If more funds are needed, the commune should consider the possibility of assigning a portion of revenue from taxes on property, for example, to finance the development of the water sector.

### 3) Standardize Public Tap Management

Standardize and enforce a common price, hours of operation, and management procedures at public taps. As per international norms, water expenditures should not exceed 5% of average income, which by the team's calculations means a price-per-bucket of around 30Ar.<sup>194</sup>

Strongly encourage users to pay by bucket or by day instead of by month, because the former disrupts the payment of both the tap managers' salaries and prompt payment of the commune's water bill.

### 4) Understand and Implement a Regulatory Framework

The commune needs to understand and implement the current legal framework for water and sanitation when designing a new management plan for the water supply system. Support from state institutions should be requested (Ministry of Water or ANDEA).

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<sup>193</sup> Jean Ramaholison, March 19, 2009.

<sup>194</sup> If, on one side a family earns \$ 4 per day, that means \$120 in one month, which means 240,000 Ar per month (in accordance with some of the team's focus groups guides). 5% of this amount is 12,000 Ar per month. On the other hand, if the family has 5 members and they consume 50 liters per day, that means a total family consumption of 7.5 cubic meters per month. Therefore, the maximum price the family should pay is  $12000/7.5 = 1600$  Ar per cubic meter, or 32 Ar per bucket of 20 liters.

# Recommendations: Ankadikely Ilafy

## 5) Reduce Connection Costs

As in Vavatenina, the commune should consider the possibility of subsidizing private connection costs in order to make them affordable to a greater number of households. This idea, together with the previous one, will contribute to an increased number of people connected to the system, increased monthly income for the water system, and the creation of economies of scale (by increasing the ratio of total revenue/total operating cost).

## 6) Implement Specific Tax on Waste Removal

Waste removal was reported as a majority of commune budget expenditures; as such, the commune should consider a tax specifically for this service. It may consider, in consultation with JIRAMA, implementing a cross-subsidizing tax on water destined exclusively for sanitation. They could consult with SAMVA in Antananarivo, which follows a somewhat successful model. However, every potential new tariff should be accompanied by measures to improve the existing sanitation conditions. Improving service roads for waste collection could be one of the priorities.

## 7) Conduct Sensitization Campaigns on Water Service

The commune needs to reinforce the importance and rational for paying for water supply service. Although water is a basic human need, it is necessary to pay for the delivery of this good. An awareness campaign on these principles may increase the willingness to pay for water services.

## Prioritization of Recommendations

To assist policymakers and NGO implementing partners, the team has devised a matrix for determining the relative priorities of the recommendations brought forth in this report.

Each potential recommendation is classified by the following characteristics: feasibility of

# Recommendations: Ankadikely Ilafy

implementation; importance to the commune's priorities; potential direct benefit (revenue) to the commune; potential indirect benefit (public opinion or other spillover effects); cost of implementation. Based on the ratings of Low, Medium, or High for each characteristic, the recommendation is given an overall priority. Note that with Costs (only), it is better for the characteristic to be Low.

Recommendation	Feasibility	Importance to Commune	Potential direct benefit	Potential indirect benefit	Cost	Overall Priority
Engage FIBTAMA to Investigate Methods to Maximize Recovery of Low-level Income Tax	High	High	High	Low	High	High
Before Changing Tax Rates, Focus on Maximizing Collection at Current Rates	High	High	Low	High	Med	High
Accelerate Land Titling to Increase the Tax Base for the Property Tax on Land	Low	High	High	Med	High	Med
Consider Hiring More Personnel for Tax Collection	Med	Med	High	Low	High	Low
Better Predict Public Revenue	High	Med	Low	High	Low	High
Enhance Transparency in Public Finance Management:						
• Make Budget Public & Available	High	Med	Low	Med	Low	Med
• Tax Awareness Sensibilizations	High	Med	Med	High	Med	Med
• Publicizing Projects Performed with Tax Revenue	High	High	Low	High	Low	High
• Participatory Budgeting	Low	Low	Med	High	High	Low
• Yearly Public Tax Forum	High	Med	Med	High	Low	High
Continue Enforcement against Corrupt Practices	Med	High	Low	High	Med	Med
Strengthen the Awareness of Tax Evaders	Med	High	High	Med	Med	Med
Crack Down on Illegal Construction	Low	High	High	Med	High	Med
Increase Fokontany Incentives for Tax Payment	High	High	Med	High	Low	High
Accelerate the Distribution of the Tax Bills where Possible	Med	Med	High	Med	Med	Med
Water and Sanitation Sector Specific						
Enforce JIRAMA-Commune Water Tax Agreement	Med	High	High	Med	Med	Med



## Recommendations: Ankadikely Ilafy

Give the Water Sector the Importance it Deserves	Med	Med	Low	High	High	Med
Standardize Public Tap Management	Med	Med	Low	Med	Med	Med
Understand and Implement the Regulatory Framework	Med	Med	Low	Med	Low	Med
Reduce Connection Costs	Low	High	High	Med	Low	High
Implement Specific Tax on Waste Removal	Low	High	High	Med	High	Med
Conduct Sensitization Campaigns on Water Service	High	Med	Med	Med	Low	Med

## VI. Further Recommendations

### Recommendations to the Central Government

The SIPA team recognizes that in order for communes to improve public services there needs to be a demonstration of support and strong political will from the central government. The team recommends that the central government:

- **Enact a state subsidy to support the cost of water provision in communes where JIRAMA is not operating.** It is evident that in communes where JIRAMA does not operate, the quality of service is far lower than in communes where they do operate. A subsidy to support service in non-JIRAMA communes can help to minimize this disparity and is necessary to ensure that all communes can cover the costs of adequate water and sanitation services. This subsidy should be added to the annual state budget and the rate determined should be inversely proportional to the access rates of each commune. This subsidy should be destined only for investment in infrastructure and development, and should not be utilized for operation or maintenance.
- **Ensure that all necessary measures are taken so that decentralization does not exacerbate economic disparities between communes.** This may involve providing progressive subsidies for development investment in disadvantaged communes, with a particular focus on bridging disparities between rural and urban communes. This should also include exploring all possible avenues for partnerships that can enhance each commune's technical and administrative capacity for local taxation, with due priority given to disadvantaged communes.
- **Explore all opportunities for investing in water sector development.** Improving infrastructure and increasing access to potable water and sanitation should be a high priority for the central government, as indicated by the country's

## Further Recommendations

main development objectives. Improving the technical capacity of personnel in each commune is imperative to ensuring equitable and adequate access to water.

- **Evaluate the effects of recent tax reforms.** A comprehensive assessment of recent tax policy reforms should be conducted as soon as possible. Applying the principle of vertical equity pricing for taxes should be explored so that tax rates may be calculated according to ability to pay and the standard of living, particularly of farmers, can be taken into account.

### Recommendations for Further Research

Our study identified several topics for further research. These recommended areas for further study are based on interesting findings, but for which our data was inclusive or lacked substantive information on which to base a recommendation. Further study of the topics listed below, however, may become the basis of recommendations of great consequence to this study.

#### Further Research for Vavatenina:

- 1) Investigate methods of supporting the agricultural sector. This will improve the overall low tax base of the commune.
- 2) Investigate reasons for nonpayment of taxes, and conduct related cost benefit analysis related to specific service improvements. For example, the cost of renovating the market and benefit of increased tax revenue from market ticket sales.
- 3) Study the ways in which access to water is used as political tool, and how this practice can be eliminated.
- 4) Pursue the possibility of a year-round tax payment station between Vavatenina and Fenerive Est.

#### Further Research for Ankadikely Ilafy:

## Further Recommendations

- 1) Study the potential for the creation of a local water and sanitation fund. This fund could be generated from local revenue on water. For example, 5Ar per bucket that is normally used for decentralized maintenance costs could go to this centralized fund.
- 2) Conduct a cost benefit analysis for creating a permanent entity at the commune level that is responsible for doing periodic censuses of all taxable sectors.
- 3) Conduct a cost benefit analysis of increasing operating hours at public taps, including incentives needed for the tap manager to keep the stand open longer, and if longer hours of operation would increase revenue and users' willingness to pay.

### General Areas of Further Research:

- 1) Investigate the extent of corruption in taxation and measures to improve good governance. Corruption was mentioned to in several of our focus group interviews, but the scope of our study did not warrant a detailed study of its extent. Corruption undoubtedly influences willingness to pay taxes and tax evasion rates. Therefore, specific recommendations for good governance implementation would be quite complimentary to this study.
- 2) Investigate what profitable products are not presently and could be included in the agricultural products tax. There appears to be more tax potential in the agricultural sector related to cash crops and export crops. Taxing semi-finished and finished wood products was given as an example.

# VII. Concluding Remarks

While this study indicates that there are several areas in which Vavatenina and Ankadikely Ilafy can increase their fiscal and nonfiscal revenue and improve their existing water and sanitation sectors, the team believes that each of these communes has the capacity and opportunity to do so through the implementation of their recommendations.

It is the team's desire that the aforementioned recommendations be utilized to help the communes reach their development goals and that through their implementation best practices may be extracted and applied throughout the country. The team strongly believes that in this manner great successes can be made to bolster commune development initiatives, particularly in regards to water and sanitation.

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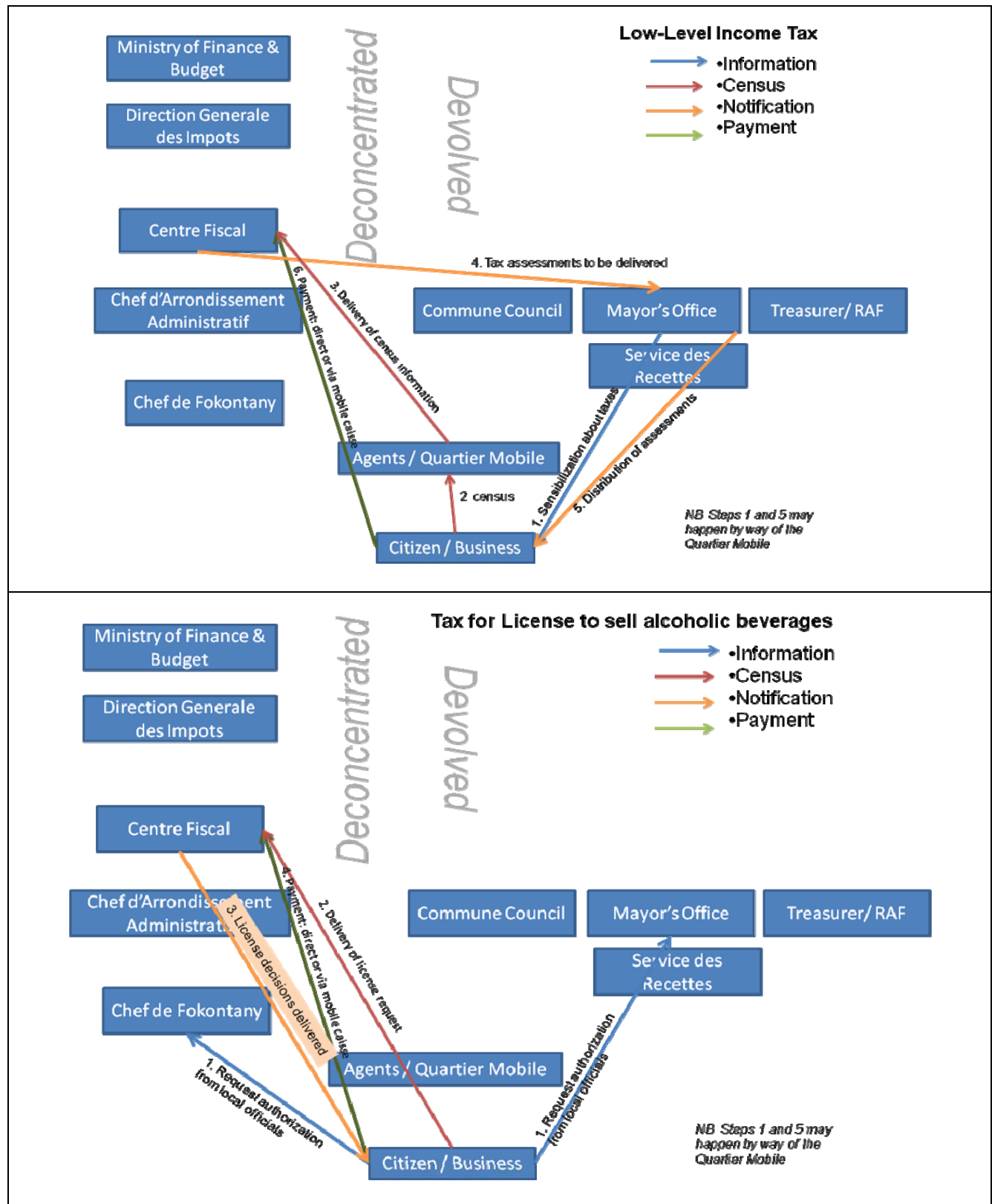
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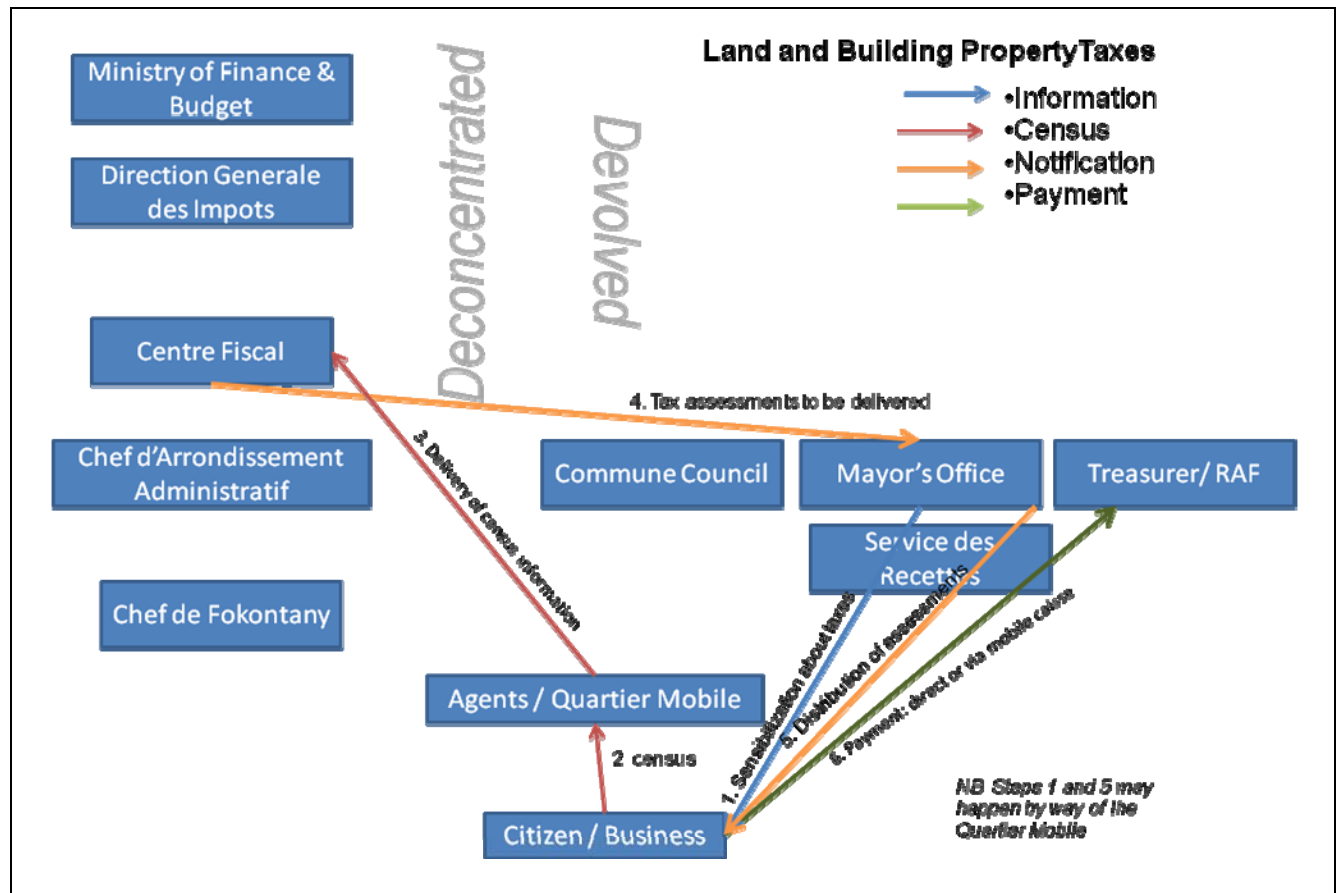
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# Annexes

## Annex 1: Chart of Tax Flows



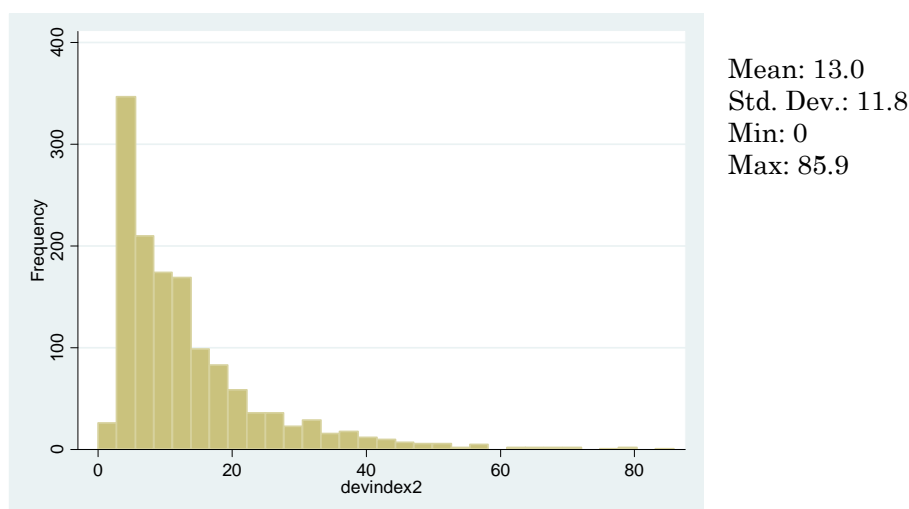


## Annex 2: Explanation of Index Calculation Methodology

In order to be able to assess the development opportunities of each commune, the team used data collected by Cornell researchers in 2001 to construct three indices. The data, available at <http://www.ilo.cornell.edu/ilo/data.html> as of May 6, 2009, was collected during a commune-level survey assisted by INSTAT that obtained information from nearly all of the over 1500 communes in Madagascar. This impressive dataset asked questions about infrastructure, socioeconomic composure, natural disasters, and agricultural production, among other topics.

### Index 1: Development Opportunities Index

This index is intended to measure the level of infrastructure that is already existent in the commune; this is thought to be a prerequisite for sustainable growth. The index values each basic infrastructure as one point, business-related features as 5 points, and complex entities like ports or airports as 10 points. The index is then created by simply adding up these points for each commune, dividing by 71 (the total points possible as per the survey instrument), and multiplying by 100. Below is the distribution of values across Madagascar, along with the mean, standard deviation, maximum, and minimum:

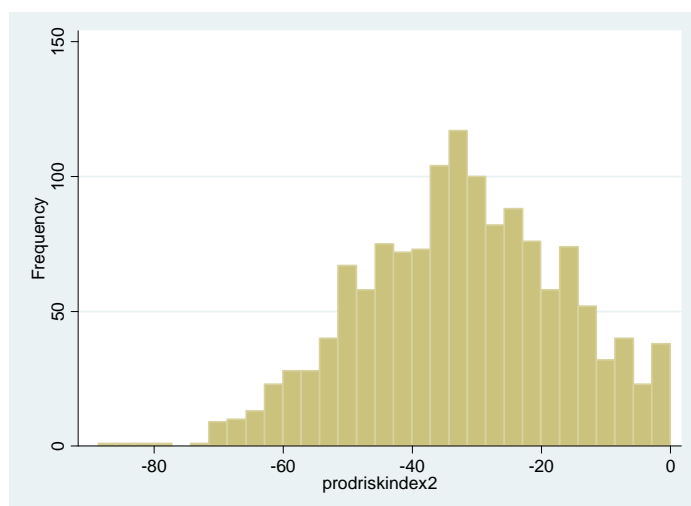


### Index 2: Production Risk Index

This index is meant to capture the agricultural and economic volatility, as measured by questions about the prevalence of natural disasters and plant and livestock disease in the last three years. In the survey, a score ranging from 0 to 3 is possible for each question: 0 meaning the event has never occurred in the past three years, and 3 meaning each of the past three years. To create the index, the responses to such questions are added up and discounted by the relative share that agriculture and livestock comprise in the commune's economy (also asked in the survey). The total scores are made negative to reflect the fact that higher values are considered worse, and normalized over the maximum observed value, which was nearly 800, and multiplied by 100. Below is the distribution of values across Madagascar, along with the mean, standard deviation, maximum, and minimum:

Mean: -32.3

Std. Dev.: 15.7



Min: -88.7

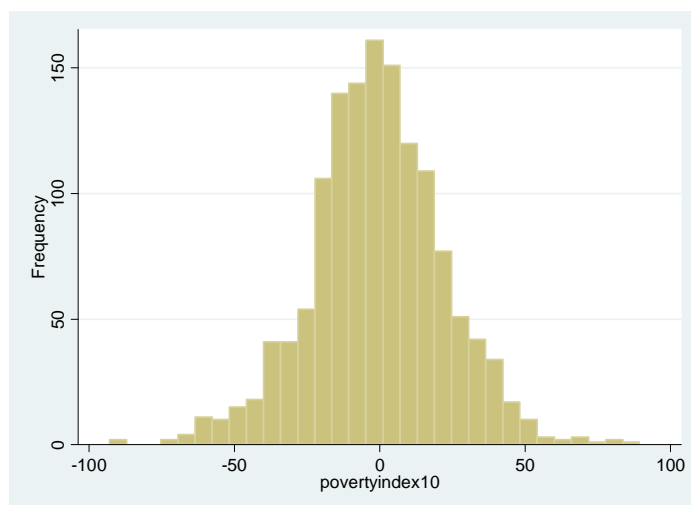
Max: 0

### Index 3: Poverty Index

This index is the most complex, as it was designed to weight more heavily the extremely rich and extremely poor, yet have a normalized distribution. The survey recorded the percentage of rich, moderate, poor, and extremely poor in the commune (for definitions, refer to the dataset). The index was then calculated using this formula:

$$100 * \ln \left( \frac{RICH^2 + MODERATE}{POOR + COMPLETELYPOOR^2} \right)$$

Below is the distribution of values across Madagascar, along with the mean, standard deviation, maximum, and minimum (note that this index can take both positive and negative values):



Mean: -1.0

Std. Dev.: 23.0

Min: -92.9

Max: 89.5

## Annex 3: List of All Interviews

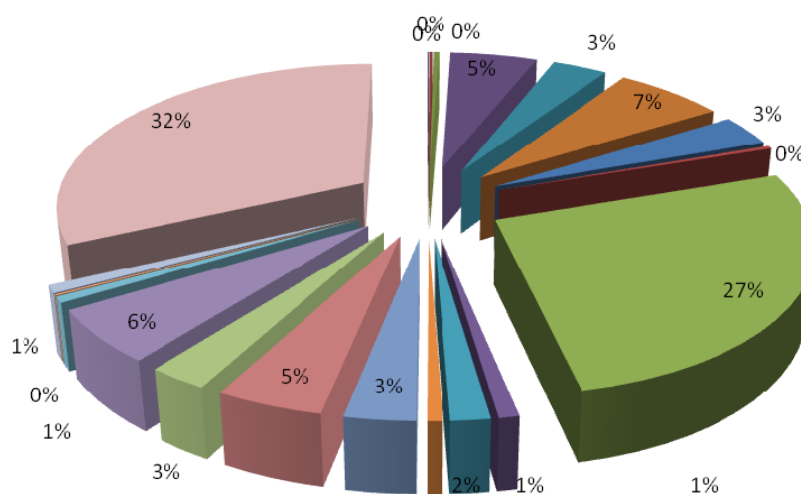
Date	Name	Position	Location
1/7/09	Mr. Stephania Rakamiarson	Regional director, DGI	Fenerive -Est
1/8/09	Mr. Rafy Diurbain; Mr. Lala Filibert	Secrétaire, Trésorier, Comptable; 1 <sup>st</sup> adjoint au maire	Vavatenina
1/8/09	Mr. Etienne Andrianarivelo	Percepteur Principale de Vavatenina	Vavatenina
1/9/09	Mr. Damour Manitrarivony, and Mr. Tahiry Raherimampionona	Chef of the Service Regionale des Entreprises (SRE), and Chef de Centre Fiscal (CF) de Tamatave	Toamasina/ Tamatave
1/12/09	Mr. Charles Rakotondrasoa	Chef du service des recettes	Ankadikely Ilafy
1/12/09	Mr. Jean Ramaholison	Responsable Administrative et Financier	Ankadikely Ilafy
1/12/09	Mr. Clément Rakotoarimalala	Chef d'Arrondissement Administratif	Ankadikely Ilafy
1/13/09	Mr. Jaques Solo	Directeur de la Législation de la Fiscalité Locale	Antananarivo
1/13/09	Mr. Tsiry Randrinsigaona	Adjoint Chef Fokontany	Ankadikely Ilafy
1/13/09	Mr. Nouah Etradriounampionaoa	Percepteur Principale d'Antananarivo	Antananarivo
1/13/09	Mr. Tiaray Razafimanantena	Ingénieur Statisticien Economiste, Directeur des Statistiques des Ménages, INSTAT	Antananarivo
1/13/09	Ms. Olga Randriamasimanana	Chef du Service des Statistiques et de l'Intégration des Données, DGI	Antananarivo
1/13/09	Mr. Vonjy	Chef du Service de la Fiscalité Locale, M. de la Décentralisation	Antananarivo
1/14/09	Mr. Alain Randriamaherisoa	Director General of Water	Antananarivo
1/14/09	Mr. François Faly	Chef de Division des Recettes Fiscales, Commune Urbaine d'Antananarivo	Antananarivo

3/19/09	Mr. Zazà Razafindramamba	1 <sup>er</sup> Adjoint au Maire	Ankadikely Ilafy
3/19/09	Mr. Jean Ramaholisonramaholison	Responsable Administratif	Ankadikely Ilafy
3/19/09	Mr. Charles Rakotondrasoa	Service de Recouvrement	Ankadikely Ilafy
3/24/09	Mr Noso Barthelemy	2 <sup>e</sup> Adjoint au Maire	
3/24/09	Mr Rafidy Alain	Responsable Service Trésorerie Comptable	Vavatenina
3/24/2009	Mr. Jules Razafimandimby	irecteur de la planification stratégique de la JIRAMA	Vavatenina
3/24/2009	Mr Etienne Andrianarivelo	Percepteur Principal	Vavatenina
3/25/2009	Mme Mihaja	ANDEA	
4/02/2009	Mr. Bertrand Rafanomezantsoa	Le régisseur de droit de stationnement	Ankadikely Ilafy
4/02/2009	Mme Liva Harisoa	Une fontainière du Quartier d'Ankadikely	Ankadikely Ilafy
4/02/2009	Randriamifidimanana Honoré	Le ticketeur de marché d'Ankadikely Ilafy	Ankadikely Ilafy
4/02/2009		JIRAMA - Chef d'Agence	Analamahitsy

## Annex 4: Budget Calculations for Vavatenina

2005 Relative contribution of taxes to budget

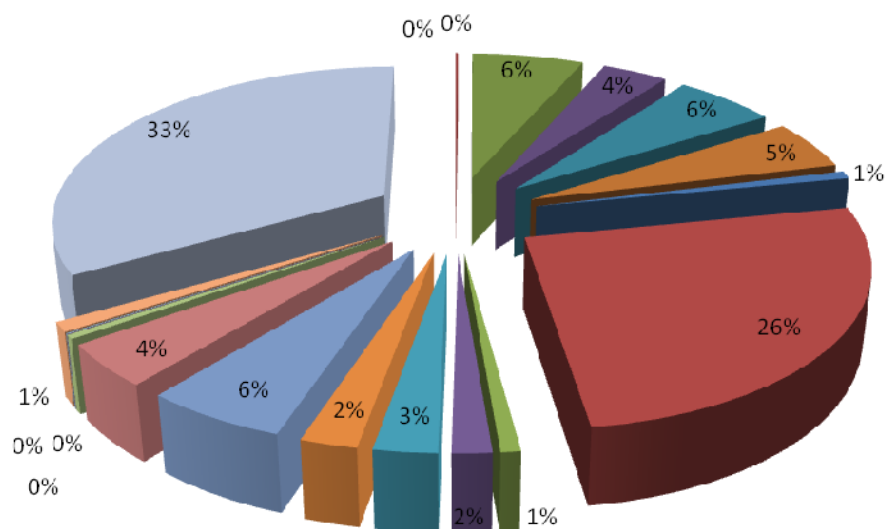
- Impôts Fonciers sur la Propriete Batie
- Imports Fonciers sur la Propiete non Batie
- Taxe annexe a I.L.F. P.B
- Centimes additionnels a la Tax professionnelle
- Taxe sur les velomoteurs et autres vehicules a moteur non immatricules, bicyclette, pousse-pousse, chars et charrettes
- Taxe sur les fetes, spectacles et manifestations diverses
- Taxe sur les ceremonies contumieres autorisees
- Taxe de visite et de poinconnage des viandes
- Taxe d'eau
- Droit de delivrance de passe-passe des vodies
- Droite de collecte (produit, orpaillage...)
- Taxe d'abattage
- Droit de voirie
- Droite de place sur les marches, halles, foires
- Droite de fourriere, frais de conduite et de gardiennage
- Produits des expeditions dea actes administratifs et des actes de l'etat civil
- Droit de legalisation de signature
- Droit de'exhumation et de reinhumation
- Droit d'arbitrage et de conciliation
- Ristourne sur taxe sur les transactions et importations





## 2006 Relative contribution of taxes to budget

- Imports Fonciers sur la Propriete non Batie
- Taxe annexe a I.L.F. P.B
- Centimes additionnels a la Tax professionnelle
- Taxe sur les velomoteurs et autres vehicules a moteur non immatricules, bicyclette, pousse-pousse, chars et charrettes
- Taxe sur les fetes, spectacles et manifestations diverses
- Taxe sur les ceremonies contumieres autorisees
- Taxe de visite et de poinconnage des viandes
- Taxe d'eau
- Droit de delivrance de passe-passe des vodies
- Taxe d'abattage
- Droit de voirie
- Droite de place sur les marches, halles, foires
- Droite de fourriere, frais de conduite et de gardiennage
- Produits des expeditions dea actes administratifs et des actes de l'etat civil
- Droit de legalisation de signature
- Droit d'exhumation et de reinhumation
- Prestation de service et autres
- Droit d'arbitrage et de conciliation
- Ristourne sur taxe sur les transactions et importations



### 2005-2006 Comparison of expected vs. actual amounts

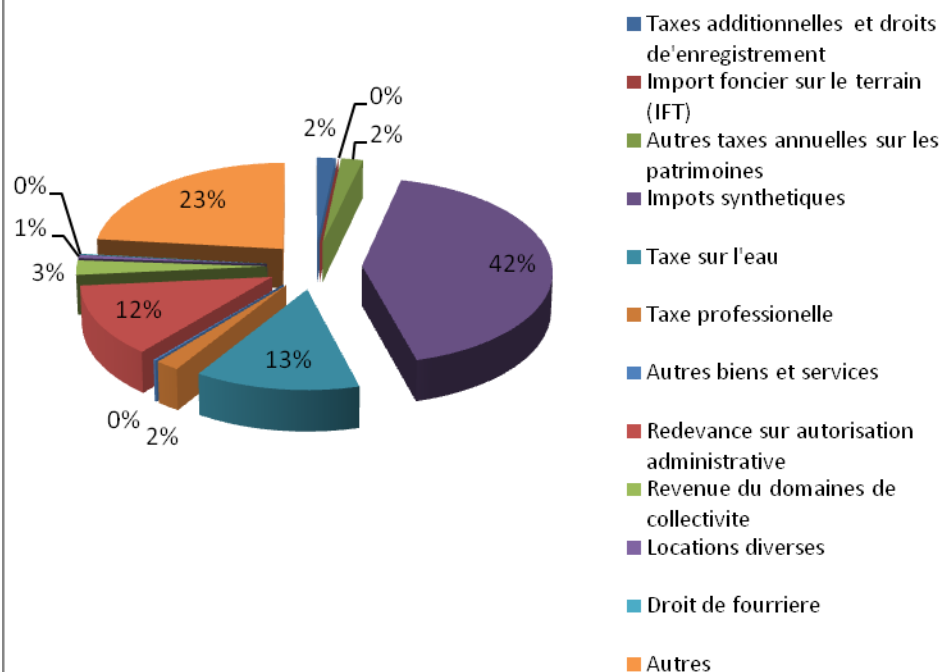
The chart displays the following categories on the y-axis (from top to bottom):

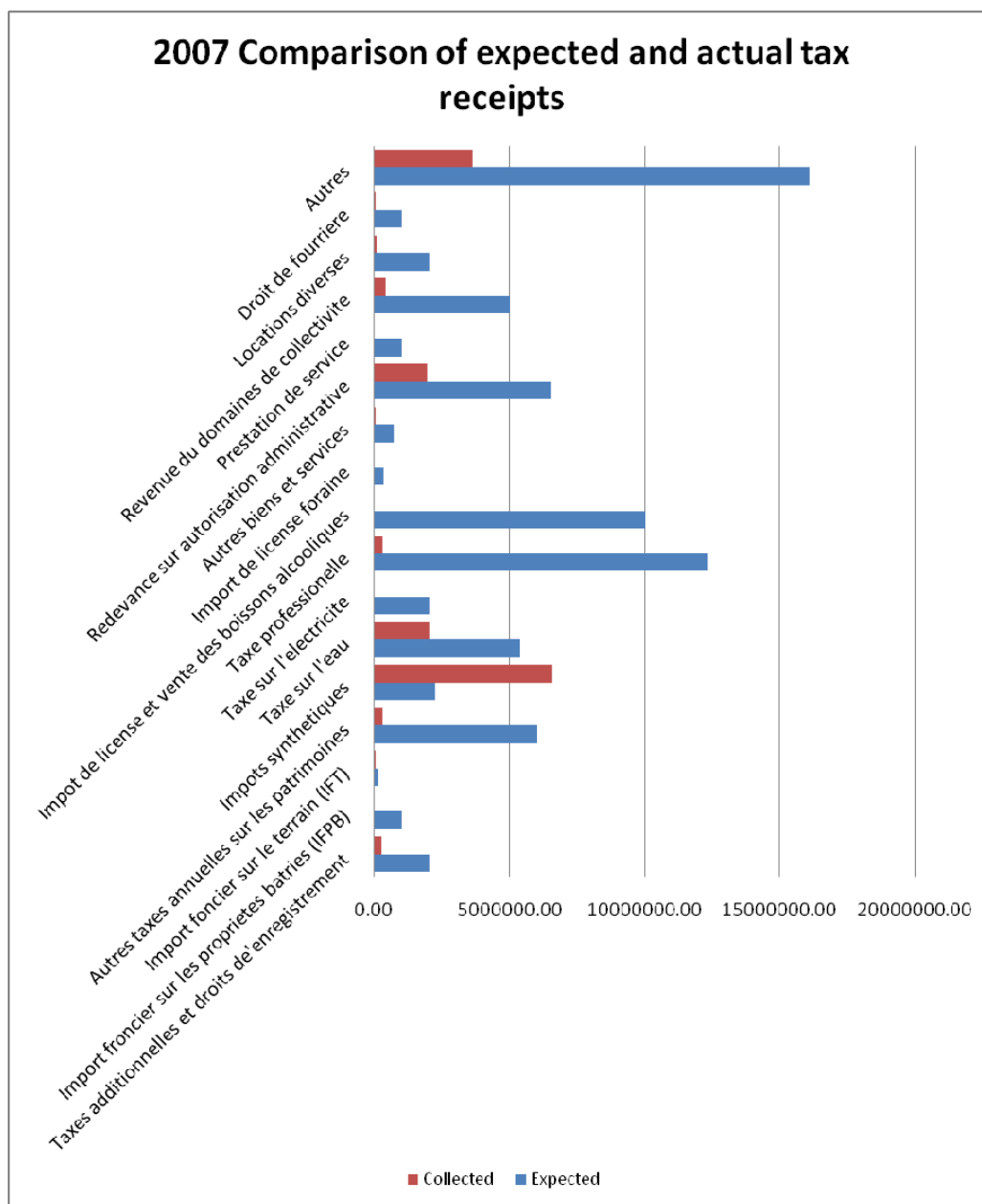
- Produits des expéditions des actes administratifs et de signature
- Droit de fourrière, frais de conduite et de gardiennage
- Droit de place sur les marchés, halles, foires
- Taxe d'abatage
- Taxe d'arpilage...
- Droit de collecte (produit, orpailage...)
- Taxe sur les appareils vidéo
- Droit de passe-passe des vodios
- Taxe d'électricité
- Taxe d'eau
- Droit de délivrance de passe-passe des vodios
- Taxe sur les enseignes lumineuses
- Taxe sur la publicité: affiches, panneaux, réclames, enseignes lumineuses
- Taxe de visite et de poinçonnage des viandes
- Taxe sur les fêtes, spectacles et manifestations autorisées
- Centimes additionnels à la Taxe professionnelle
- Imports Fonciers sur la Propriété non bâtie
- Imports Fonciers sur la Propriété bâtie
- Imports Fonciers sur la Propriété bâtie
- Imports Fonciers sur la Propriété bâtie
- Imports Fonciers sur la Propriété bâtie
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- Imports Fonciers sur la Propriété bâtie
- Imports Fonciers sur la Propriété bâtie
- Imports Fonciers sur la Propriété bâtie
- Imports Fonciers sur la Propriété bâtie

The legend indicates:

- Recouvrements Effectues (Purple)
- Previsions Budgetaires Primitives Et Additionnelles (Green)
- Previsions Budgetaires Primitives Et Additionnelles (Blue)

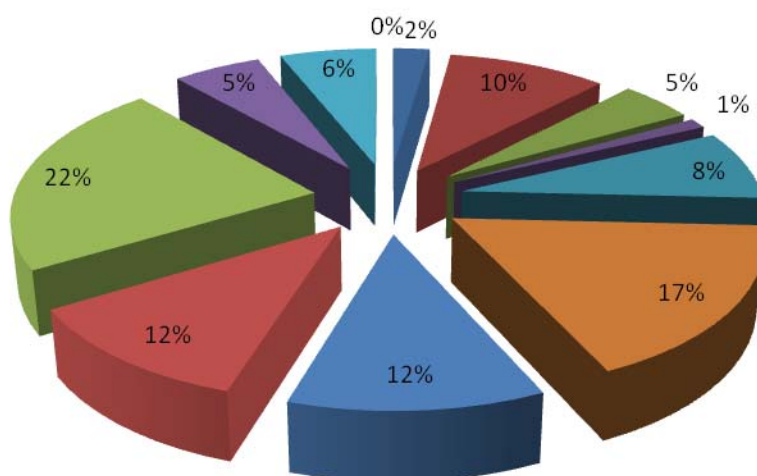
## 2007 Relative contributions of taxes collected to budget



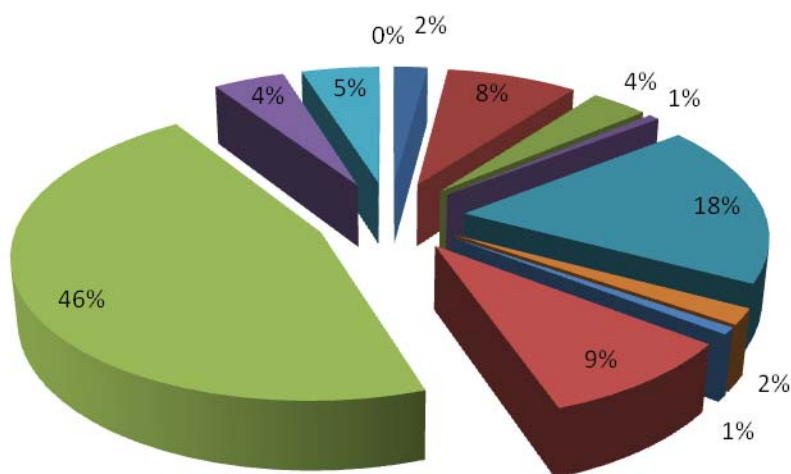
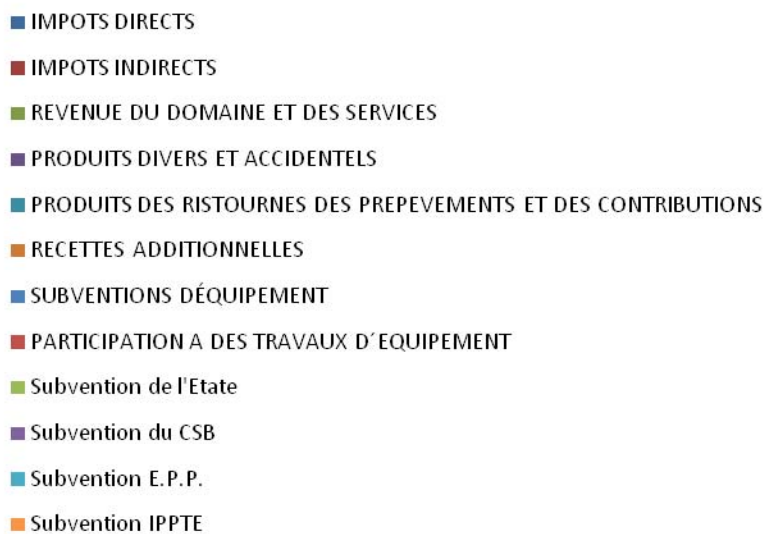


## 2005 total budget revenue

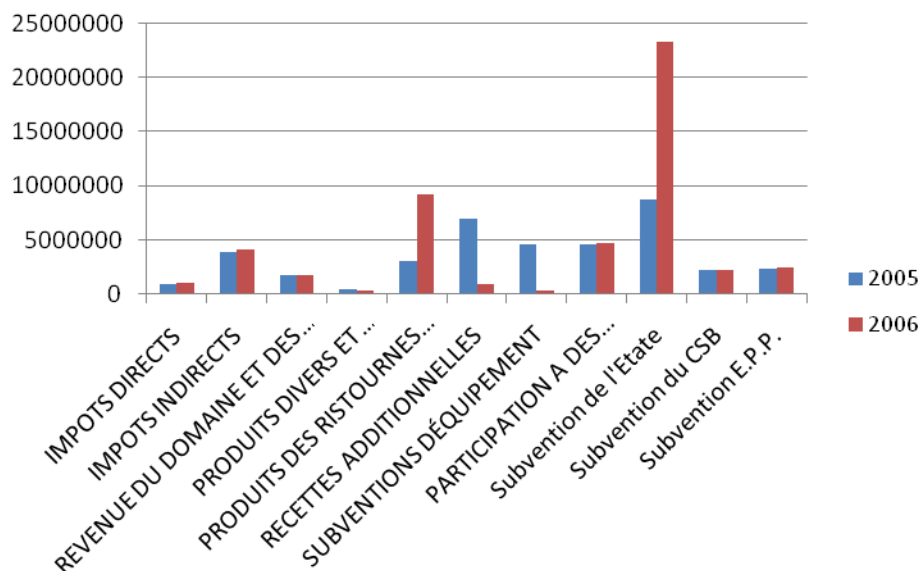
- IMPOTS DIRECTS
- IMPOTS INDIRECTS
- REVENUE DU DOMAINE ET DES SERVICES
- PRODUITS DIVERS ET ACCIDENTELS
- PRODUITS DES RISTOURNES DES PRELEVEMENTS ET DES CONTRIBUTIONS
- RECETTES ADDITIONNELLES
- SUBVENTIONS DÉQUIPEMENT
- PARTICIPATION A DES TRAVAUX D'EQUIPEMENT
- Subvention de l'Etat
- Subvention du CSB
- Subvention E.P.P.
- Subvention IPPTE



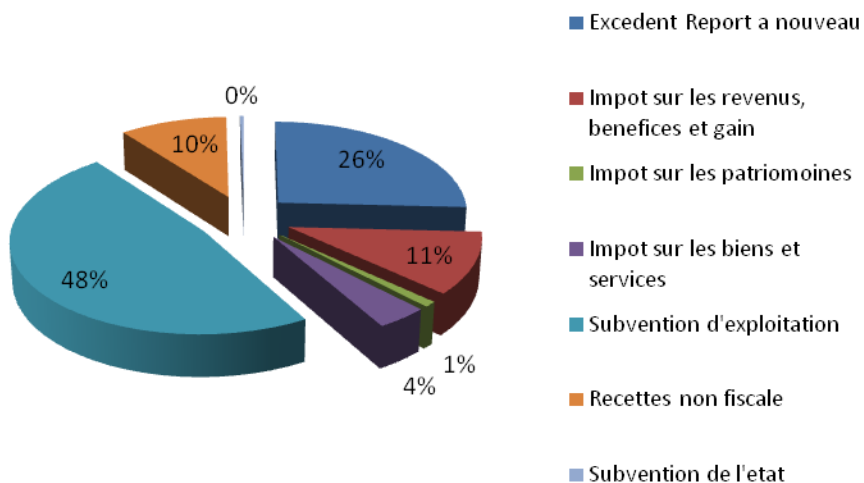
## 2006 total budget revenue



## 2005-2006 Evolution of revenues



## 2007 Revenue



## Annex 5: Sample Focus Group & Interview Guide

*Guide d'entretien en groupe – les « focus groups »*

*Groupe 1 : Vendeurs/Vendeuses du marché*

### Notes pour le conducteur en gras

**Introduction :** Bonjour. Nous faisons parties d'une équipe qui travaille dans le rôle de consultant pour WaterAid, une ONG internationale. Nous aidons WaterAid à comprendre le système des taxes au niveau communal et également comment améliorer l'accès à l'eau potable dans les communes. Nous espérons découvrir à nous vos expériences avec les taxes ici dans la commune. Nous estimons que cette étude aidera votre mairie à prendre les décisions pour bien améliorer et les taxes et l'accès à l'eau potable dans votre commune.

Nous commençons par demander quelques questions de vous et vos avis sur la situation actuelle des impôts et des services d'eau. Ensuite, nous vous donnerons un formulaire à quelques questions. Merci encore de votre volontariat.

### Questions de connaissance :

- Combien de temps avez-vous vécu ici ?
  - Combien d'enfants avez-vous ? Quels sont leurs âges ?
  - Que faites-vous pour le travail ? Comment trouvez-vous ce travail ?
  - Qui est le responsable pour le paiement des taxes dans le ménage ?
- Assurer-vous d'un groupe de similarités—en âge, en genre, en occupation, etc....**

### Satisfaction avec les taxes

1. Que pensez-vous des impôts dans la commune ?
2. Payez-vous des impôts ?
3. Pourquoi est-ce que vous payez OU ne payez pas les impôts ?
4. Lesquelles des choix suivantes sont les plus importants selon vous par rapport aux impôts ? L'avantage, les taux des impôts (i.e., la somme que vous payez), le nombre des impôts, ou autre chose ?
5. Que dites-vous sur les aspects suivants dans le système des impôts ?
  - a. L'avantage de paiement
  - b. Le taux des impôts (le montant que vous payez)
  - c. Le nombre des impôts (les différents types)
  - d. Les autres sentiments ?
6. Considérez-vous que le paiement des impôts soit nécessaire ? Pourquoi ou pourquoi pas ?
7. Qui est le bénéficiaire des impôts ?
8. Qui paye le plus des taxes ? Pour quelles taxes ?
9. Une commune doit fournir des services pour ces habitants. En tant que services assurées par la commune (hors des taxes), lesquelles sont les plus importantes selon vous ? Eau potable, Assainissement, Santé, Infrastructure, Education, les autres ?



## Compréhension des taxes

10. Savez-vous où votre argent est en cours? Est-ce important pour vous?
11. Savez-vous où et comment payer des impôts?
12. Si vous payez la ristourne, comment allez-vous payer? Quand l'avez-vous payé?

## Services d'Eau

1. Combien d'entre vous vont aux bornes fontaines régulièrement ? Combien disposent d'un branchement particulier ?
2. **Adressé aux utilisateurs de la borne fontaine :** Combien de fois avez-vous rempli un seau d'eau dans une semaine?
3. **Adressé aux utilisateurs du branchement particulier :** Quel est la quantité d'eau que vous pensez consommer ?
4. Êtes-vous satisfait des services d'eau? [**échelle de satisfaction : 1 (le pire) – 10 (le mieux)**]
5. Que pensez-vous sont les plus gros problèmes avec les services d'eau dans votre commune? Qualité, fiabilité, prix, ou d'autres?
6. Seriez-vous prêt à payer plus d'impôts pour améliorer les services d'eau? Avant de répondre, écoutez cette histoire. Une certaine commune veut fournir aux citoyens un réseau d'eau potable qui est de bonne qualité, disponible 24h par jour, et il dispose de double le nombre de bornes fontaines. Malheureusement, la commune n'a pas de financement pour la mise en œuvre ; donc, elle va demander aux citoyens des impôts. Combien d'Ar supplémentaires doivent payer un citoyen par seau de 20L, selon vous, pour achever ce nouveau réseau ?
  - a. Ar supplémentaire par seau ?
  - b. Ar supplémentaire par seau ?
  - c. Ar supplémentaire par seau ?
  - d. Ar supplémentaire par seau ?
  - e. Ar supplémentaire par seau ?
  - f. Ar supplémentaire par seau ?
  - g. Ar supplémentaire par seau ?
  - h. Ar supplémentaire par seau ?
  - i. Ar supplémentaire par seau ?
  - j. Ar supplémentaire par seau ?
  - k. Plus de 10 Ar ?

**Après l'avoir discuté pendant quelques minutes, distribuez les formulaires et les stylos, un pour chaque participant. Lisez les questions dedans à haute voix à tout le groupe et assurez-vous de la compréhension de tout le monde. En suite, lisez les directions à haute voix.**

**Donnez 5 à 10 minutes pour le remplir, en suite collectez-les.**

**Pour conclure, demandez aux participants :**

Avez-vous d'autres sentiments sur les impôts et les services d'eau dans la commune ?

Avez-vous des questions à me poser ?

Merci beaucoup de votre participation aujourd'hui. Nous avons beaucoup discuté et beaucoup appris. Avec votre aide, nous espérons faire développer la commune.

*Formulaire à Remplir*

*Groupe 1 : Vendeurs / Vendeuses du marché*

## Directions:

- **S'il vous plaît, remplissez les questions suivantes au meilleur de votre connaissance.**
- **Si vous ne parvenez pas à faire une estimation raisonnable, laissez-la en blanc.**
- **Si la question n'est pas applicable, écrivez N / A.**
- **Si vous ne souhaitez pas divulguer des informations, écrivez X.**

Merci encore de votre participation!

1. Dans la saison des pluies, combien d'argent gagnez-vous chaque jour? \_\_\_\_\_.  
Chaque semaine? \_\_\_\_\_
2. En saison sèche, combien gagnez-vous chaque jour? \_\_\_\_\_.  
Chaque semaine? \_\_\_\_\_
3. Combien d'argent avez-vous épargné chaque semaine ? \_\_\_\_\_
4. Combien dépensez-vous chaque semaine ? \_\_\_\_\_
5. Avez-vous payé une ristourne sur ce que vous produisez ? (Oui / Non) \_\_\_\_\_
6. Savez-vous combien au total des impôts vous payez chaque année ? (Oui / Non) \_\_\_\_\_
7. Si oui, combien ? \_\_\_\_\_
8. Inclure la répartition des taxes:
  - a. Ristourne \_\_\_\_\_
  - b. Impôt Foncier sur le Terrain \_\_\_\_\_
  - c. Impôt Foncier sur la Propriété Bâtie \_\_\_\_\_
  - d. Impôt Synthétique \_\_\_\_\_
  - e. Impôt Licence de Vente de Boissons Alcooliques \_\_\_\_\_
  - f. Impôt parafiscale / Les taxes communales \_\_\_\_\_
  - g. Eau (publics et privés de robinets séparément) \_\_\_\_\_
  - h. Taxe Annuelle Sur Les Appareils \_\_\_\_\_
9. Combien payez-vous des taxes nationales? Total: \_\_\_\_\_
10. Combien payez-vous dans chacun des éléments suivants:
  - a. Taxe Sur la Valeur Ajoutée \_\_\_\_\_
  - b. Impôt sur le Revenu \_\_\_\_\_

Interview Guide : 2<sup>e</sup> Adjoint au Maire, Vavatenina

Date :

Lieu :

Personne enquêtée :

Acronymes :

Role of the Commune, infrastructure and price	<i>Le rôle de la commune, de l'infrastructure, et des prix</i>
What is the current estimated water coverage?	<i>Quelle est la couverture du système d'adduction d'eau actuel estimé ?</i>
What is the current estimated sanitation coverage?	<i>Quelle est la couverture du système d'assainissement actuel estimé ?</i>
Is the distribution of coverage relatively even? Are there pockets of non-coverage?	<i>La distribution des ménages desservis, est-elle plus ou moins constante ? Y a-t-il des poches de non couverture ?</i>
How are investments in infrastructure made?	<i>Comment les investissements en infrastructure sont-ils faits ?</i>
How is the water line expanded?	<i>Comment le réseau d'adduction d'eau est-il élargi ?</i>
Financing/ decision to expand?	<i>Qui prend la décision du développement du système ?</i>
How are new public taps installed?	<i>Comment les bornes fontaines nouvelles sont-ils installés ?</i>
Financing/ decision to expand?	<i>Qui prend la décision du développement du système des bornes fontaines ?</i>
What is the role of the commune in the provision of water?	<i>Quel est le rôle de la commune par rapport à la provision des services en eau ?</i>

Does the commune recover its costs of water provision?	<i>Est-ce que la commune arrive à couvrir ses coûts de fonctionnement ?</i>
What portion of water service provision is financed by central government cash transfers? And, by locally raised revenue?	<i>Ces services sont financés en quel parti par les subventions de fonctionnement ? Et, en quel parti par les sources propres de la commune ?</i>
<b>Household Connections</b>	<b>Branchements Particuliers</b>
What is the price of water in household connections, and what is included?	<i>Quelle est la tarification d'eau, et y compris quels services?</i>
How and why has the price changed over time?	<i>Comment le prix a-t-il changé pendant des années ? Et pourquoi ?</i> -
Are there plans to change the price? If so, how?	<i>La commune va-t-elle changer les taux des tarifs ? Si oui, comment et pourquoi ?</i>
Are water bills frequently unpaid?	<i>Quel est le taux de non paiement des factures d'eau?</i>
What are the penalties for nonpayment?	<i>Quelles sont les répercussions de non paiement ?</i>
<b>Public Stand Posts</b>	<b>Bornes Fontaines</b>
What is the price for water at public tap stands?	<i>Quel est le prix de l'eau aux bornes fontaines ? En quelle quantité ?</i>
Is it the same at all public tap stands in Vavatenina?	<i>Est-il le même partout dans la commune ?</i>
Does the revenue from the tax on water remain in the water sector?	<i>S'il y a une taxe sur le prélèvement et la provision d'eau, est-ce que ces recettes restent dans le budget destiné à l'eau et à l'assainissement?</i>
How and why has the price changed over time?	<i>Comment le prix a-t-il changé pendant des années ? Et pourquoi ?</i>
Are there plans to change the price? If so, how?	<i>La commune va-t-elle changer les taux des tarifs ? Si oui, comment et pourquoi ?</i>

How are public taps managed?	<i>Quel est le système de gestion des bornes fontaines?</i>
Are bills at public taps frequently unpaid?	<i>Les factures des bornes fontaines, sont-elles fréquemment non payées ?</i>
What are the penalties for nonpayment?	<i>Quelles sont les répercussions de non paiement ?</i>
<b>Taxes on Water</b>	<b><i>Taxes sur l'Eau</i></b>
Have you heard about the Water Code?	<i>Etes-vous courant du Code de l'Eau, sorti en 1998 ?</i>
Did you know the water code allows for taxes on water and sanitation?	<i>Connaissez-vous qu'il y a des taxes liées à l'eau et l'assainissement ?</i>
Is there a tax on water in household connections?	<i>Est-ce qu'il y a une taxe sur l'eau pour les branchements particuliers ?</i>
<ul style="list-style-type: none"> <li>○ How is it assessed? How much is it/ percent?</li> </ul>	<ul style="list-style-type: none"> <li>• <i>C'est combien/ pourcent?</i></li> </ul>
<ul style="list-style-type: none"> <li>○ Where is it paid?</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Où est-elle rendue ?</i></li> </ul>
Is there a tax on water at public standposts?	<i>Est-ce qu'il y a une taxe sur l'eau aux bornes fontaines ?</i>
<ul style="list-style-type: none"> <li>○ How is it assessed? How much is it/ percent?</li> </ul>	<ul style="list-style-type: none"> <li>• <i>C'est combien/ pourcent?</i></li> </ul>
<ul style="list-style-type: none"> <li>○ Where is it paid?</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Où est-elle rendue ?</i></li> </ul>
Is the water tax most often paid or unpaid? Payment rate?	<i>Quel est le taux de paiement de la taxe sur l'eau ?</i>
Does the tax affect the payment of water bills?	<i>Les taxes diminue-t-elle le taux de paiement des factures?</i>
<b>Willingness/ ability to pay</b>	<b><i>Volonté et Capacité à Payer</i></b>
Are people willing and able to pay the tariffs (and taxes if they exist) on public tap stands? And how do you know?	<i>Quelles sont la capacité et la volonté de payer aux bornes fontaines ? Comment savez-le-vous ?</i>

How do you know whether or not people would pay water taxes?	<i>Comment savez-vous si les gens ont la capacité et la volonté de payer ces taxes ?</i>
Do you think the water tax is fair?	<i>Pensez-vous la taxe sur l'eau est juste ? Je crois que c'est oui ! En fait et apparemment les foyers utilisateurs des BF privé ne semblent avoir aucune difficulté au paiement de leur cotisation.</i>
Could the tax be increased?	<i>La taxe pourrait-elle être augmentée ?</i>
<b>Grey Water and Trash Collection</b>	<b><i>L'eau usée et la collecte de déchets</i></b>
Does the commune have a strategic plan to expand wastewater evacuation or trash collection?	<i>Avez-vous un plan stratégique pour l'évacuation d'eau usé ou pour les déchets? Et les expansions prévues ?</i>
What public services does the commune provide in terms of wastewater collection?	<i>S'il n'y a pas une system d'égouts dans votre commune, est-ce qu'il y a d'autre système de collecte d'eau usée ? Laquelle ?</i>
What system of refuse collection exists?	<i>Et la collecte des déchets?</i>
What are the prices for these sanitation services?	<i>Qu'est-ce que la publique paye pour ces services d'assainissement ?</i>
Are there taxes associated with these services? If so, what are they and how do they behave?	<i>Y a-t-il des taxes liées à ces services ? Si oui, comment fonctionnent-elles ?</i>
What are the people's ability and willingness to pay for these sanitation services?	<i>Que sont la capacité et la volonté de payer pour ces services ?</i>
What portion of sanitation service provision is financed by central government cash transfers? And, by locally raised revenue?	<i>Ces services d'assainissement sont financés par les subventions de fonctionnement ? Et, par les sources propres de la commune ?</i>
<b>Government Subsidies</b>	<b><i>Subventions Gouvernementales</i></b>
What programs do you have or did you have in the following categories?	<i>Quels programmes avez-vous/ aviez vous dans les catégories suivant ?</i>

<ul style="list-style-type: none"> <li>• Social tariffs</li> </ul>	<ul style="list-style-type: none"> <li>○ <i>Tarifs sociaux</i></li> </ul>
<ul style="list-style-type: none"> <li>• Water tap installation</li> </ul>	<ul style="list-style-type: none"> <li>○ <i>Branchements sociaux</i></li> </ul>
<p>If they have had public sector subsidies for household connections:</p>	<p><i>Y avait-t-il les branchements sociaux à la subvention de l'état? Au présent ? Et programmé pour l'avenir ? Qui a financé ces branchements ? Est-ce qu'ils ont réussi à augmenter le taux de la population branché au réseau d'eau ?</i></p>
<p>Is there any cross subsidies from water to sanitation or vice versa? If so, can you explain the system of cross-subsidization, how it works, and why it was implemented?</p>	<p><i>Pouvez-vous nous expliquer le système des subventions pour l'assainissement (subventions entre l'eau et l'assainissement) ? Comment marche-t-il ? Pourquoi a-t-il été mis en place ?</i></p>
<p><b>Concluding questions:</b></p>	<p><b>Questions à fin :</b></p>
<p>In your opinion, how can cost recovery in water provision be improved?</p>	<p><i>Selon votre avis, comment augmenter le recouvrement des coûts / les recettes publiques dans le domaine de l'eau ?</i></p>
<p>What role can the water sector play in increasing local tax collection?</p>	<p><i>Quel rôle le secteur de l'eau pourrait-il jouer dans la fiscalité locale ?</i></p>
<p><b>Data Requests</b></p>	<p><b>Demande de données :</b></p>
<ul style="list-style-type: none"> <li>• Demographic information (population growth rate).</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Informations démographiques, y compris le taux de croissance de la population</i></li> </ul>
<ul style="list-style-type: none"> <li>• Current data on water users/tariffs</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Informations sur les usagers de l'eau (privés et publics) et le paiement de tarifs</i></li> </ul>
<ul style="list-style-type: none"> <li>• Any records on public taps and household connections run by the commune</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Archives des bornes fontaines sous l'autorité de la commune</i></li> </ul>
<ul style="list-style-type: none"> <li>• Water taxes, themselves, generate how amount revenue for the commune?</li> </ul>	<ul style="list-style-type: none"> <li>• <i>L'évolution du taux du service du système d'eau</i></li> </ul>

<ul style="list-style-type: none"> <li>Any records on public taps and household connections run by the commune</li> </ul>	<ul style="list-style-type: none"> <li><i>L'évolution du nombre des branchements particuliers et le nombre des bornes fontaines</i></li> </ul>
<ul style="list-style-type: none"> <li>Any records on public taps and household connections run by the commune</li> </ul>	<ul style="list-style-type: none"> <li><i>L'évolution des recettes des réseaux d'eau</i></li> </ul>
<ul style="list-style-type: none"> <li>Any records on public taps and household connections run by the commune</li> </ul>	<ul style="list-style-type: none"> <li><i>L'évolution de la tarification des systèmes, avec les taxes et les impôts hors tarif</i></li> </ul>
<ul style="list-style-type: none"> <li>Any records on public taps and household connections run by the commune</li> </ul>	<ul style="list-style-type: none"> <li><i>Le montant de subventions la commune a reçu pour les branchements sociaux, BF, etc.</i></li> </ul>



## Annex 6: Management Options For the Water System in Vavatenina

In order to improve the water supply service of Vavatenina, we recommend that the following options be studied:<sup>195</sup>

- The commune as water provider (current system)
- Concession or lease contract
- Management agreement or exploitation contract

### 1) The commune as water provider

In order to make the current system effective, the commune should have:

- *Legal personality and financial autonomy.* The city council should vote to establish a legal entity to manage the water service. This personality is governed by the laws of the community.
- *Financial autonomy.* Municipality regulations determine the administrative organization and the financial rules and functioning of the system. Financial accounts can be held under the commercial form.

Fees and charges should be subject to a special budget annexed to the budget of the municipality and approved by the commune council. In this financial document, the different positions would be aggregated into two sections, one for receipts, and one for spending. The revenues and expenditures for each direction would be handled by an accountant whose accounts are audited by the same inspector that controls the accounts of the commune.

### 2) Concession of public works or lease contract

This form of management is an administrative contract which directs a business to build, to finance its projects, and to perform all the work. This means that a new entity would operate the public service. In this case, the holder of the concession contract is called the dealer and the community is called the grantor. The concession consists of two elements: first the implementation and financing, and second the functioning of public service.

The concessionaire may perform the necessary work to run the public service. It may also entrust the implementation to entrepreneurs. The incurred expenses are not charged to the grantor; instead, the concessionaire is allowed to levy fees and taxes on users of the public service to recover its costs. It is extremely important that the duration of operation be sufficiently long to enable it to recoup its start-up expenses. The details of concessions are normally established by mutual agreement. The concessionaire that runs the public works and

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<sup>195</sup> Information contributed by researcher Honoré Mamindray Hafany.

operates a public service is granted the powers and benefits arising from the concept of public power (monopoly, the possibility of expropriation, easements and various ways of addressing disputes by the administrative courts). The concession contract has two distinct components:

- Regulatory decisions imposed by the municipality to the concessionaire
- Contractual provisions which are intended to clarify the financial conditions under which the concession will be operating.

No party may be under an obligation to continue the operation and management of a concession that comes to operate on a deficit on a permanent basis as a result of developments in technology or changes in economic conditions.

It may be noted that the licensor may provide financial assistance to the concessionaire in the form of grants, loan guarantees, and management assistance. In addition, the dealer may also, under certain conditions, benefit from a civil tax scheme.

This system was practiced by the commune during its contract with Lagnanana. In the case of Vavatenina, this type of management was not successful and difficult to establish because it was not profitable for the concessionaire.

### ***Contract farming:***

In a lease contract, the municipality reserves the ownership and financing of investments. The “farmer” is simply an operator required to ensure the operation of the public service, through taxes or fees paid by users for the services rendered.

The concessions, rights, and duties of the “farmer” are explicitly defined with respect to both the commune and the user. To enable the commune to recoup its investments, it collects taxes or fees payable by users and it incorporates, in addition to the remuneration of the farmer, a “surcharge” from which the proceeds are paid to the commune. The amount of the surcharge is set by the commune council, taking into account the annuity, loan capital, and interest.

## **3) Management agreement or exploitation contract**

For business operations of some public services, the municipality may use a type of contract under which the firm represents the commune to the user. The manager is paid by the community and they are liable to the commune vis-à-vis the cash revenues generated under the contract.

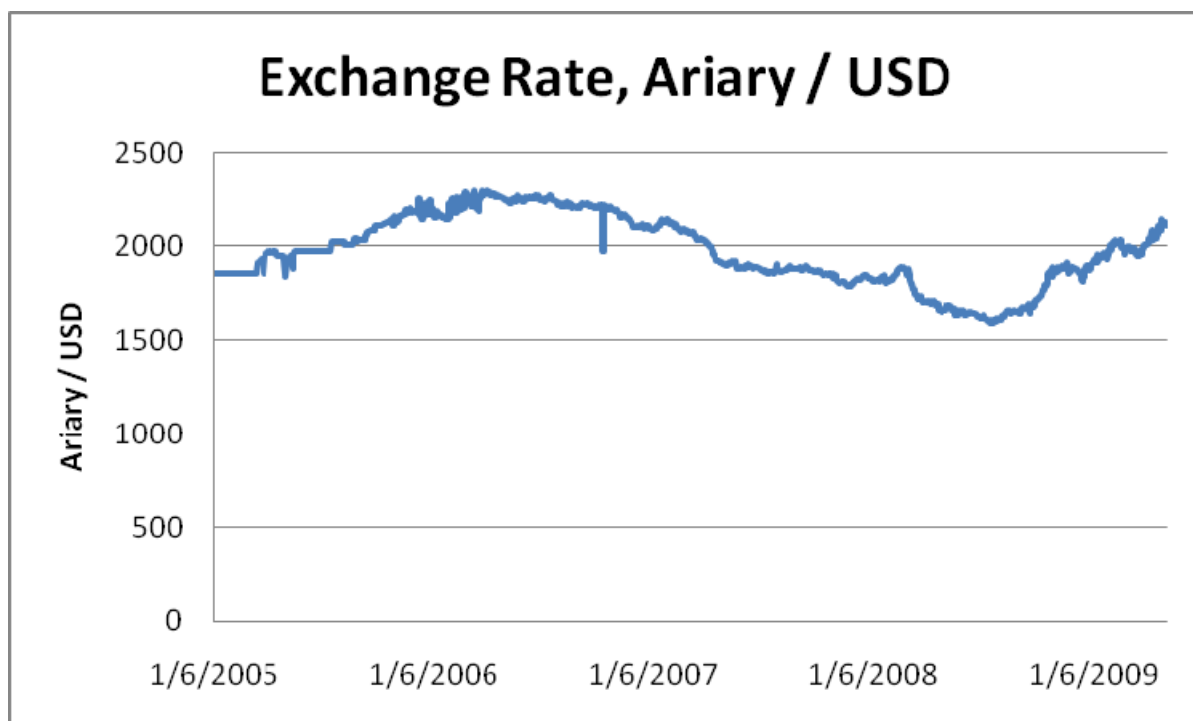
The operating contract is a regular procurement subject to the public procurement code.

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In our analysis, we find that those responsible for the commune are making the right choice by using the first system of management: the current practice. The administration should hire one or two commissioners of the water tax. Additionally, the commune council vote to make this public service financially autonomous. Thus, local councilors should vote to establish a

special budget for the water service (and sanitation, as they are inherently linked). This budget should be appended to the budget of the Commune. The various documents relating to the budgets of the municipality have also shown that in 2007 and 2008, for example, the commune had a positive balance on its capital gains tax. If the commune maintains its current system of management operations, the water and sanitation sector could receive a portion of the excess tax from the previous year. Commune councilors are asked to give more priority to investment in water service. This type of management is in the commune's best interest.

## Annex 7: Time History of Exchange Rates



Source: <http://www.oanda.com/>