



Action C1: Climate change barometer

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1. Introduction

The Life Good-local Adapt project aims to adopt demonstrative sustainable solutions for climate change adaptation in selected neighborhoods of Amurrio, Balmaseda and Legazpi, promoting the participatory identification of optimal solutions for each municipality. Through the Life Good-local Adapt project, collaboration will be fostered between the public and private initiative in order to achieve the adoption of innovative technological solutions that contribute to mitigating the main effects of climate change. At the same time, adaptation prioritization methodologies will be made available to small and medium-sized municipalities.

The project begins with the development of Action C1: Climate Change Barometer, which aims to:

- a. Identify the concerns and needs of the population in relation to climate change, and assess their level of perception of climate risk as well as their responses to it;
- b. Discover their level of climate change adaptation understanding;
- c. Identify the existing prejudices on the affordability of urban rehabilitation solutions; and
- d. Evaluate the level of accessibility to local and regional government subsidies and economic incentives.

To fulfill this objective, a questionnaire with 23 questions, including both open and closed-ended questions, has been designed and distributed among the population of the demonstrative neighborhood of the five selected municipalities. The questionnaire is divided into four sections:

- a. Socioeconomic information, to identify the profile and dwellings of the people surveyed.
- b. Climate change, to determine the level of concern related to this phenomenon.
- c. Communication, to identify if the surveyed people know about climate change related actions that are carried out by the municipality.
- d. Incentives, to discover if the surveyed people have accessed grants and if so, its characteristics (subsidy or tax relief, tax exemption or reduction, social assistance, housing rehabilitation etc.).

The questionnaire was answered by a total sample of 895 people, distributed among the municipalities of Amurrio, Legazpi and Balmaseda. In Legazpi and Amurrio, the questionnaires were carried out in two previously selected neighborhoods, corresponding to Arantzazu / San José and San Ignacio / San Martín in Legazpi, as well as Goikolarra and Landako in the case of Amurrio. Meanwhile, in Balmaseda, a single population sample was taken for the entire municipality. Thus, in Goikolarra (Amurrio) a total of 38 completed questionnaires were compiled, in Landako (Amurrio) 126; in Balmaseda 545; in Arantzazu / San José (Legazpi) 87 and in San Ignacio / San Martín (Legazpi) 99.

The completion of the questionnaires was carried out differently depending on the municipality. In Balmaseda, citizens were informed of the project and they were encouraged to participate in the survey at participating educational centers, the Euskaltegi, the Citizen Service and other municipal centers, such as the sports center, the retirement club and the women's center. Likewise, the survey was promoted through the municipality's social networks, allowing the survey to be answered online. In Amurrio, the surveys were carried out door to door where questions were read to participants and their answers recorded. In Legazpi the questionnaires were carried out by telephone. The surveys were offered in Spanish and Basque, so that each person could answer in the language with which they felt the most comfortable.

This technical summary has been made with the aim of synthesizing the results of action C1 of the Life Good-local Adapt project, both at the neighborhood and global levels as a way to promote the exchange of information among the people interested in the project. This is especially true for the participants in the network of municipalities, which has been created as part of the project to ensure its transferability and replicability.

The following is a summary description of the results obtained through the survey.

2. Results of the survey by neighborhood

2.1. Goikolarra (Amurrio)

In Goikolarra, the questionnaire was completed by 38 individuals, whose main socioeconomic profile corresponds to people between ages 35 to 60, or over 60, who have completed their primary education and are mainly retired or self-employed workers. The surveyed people were, for the most part, homeowners that live with 1 to 2 people and do not participate in any association or committee in the municipality.

The results of the survey show that the population of Goikolarra perceives climate change with high unease and considers human activity to be its main cause. The effects caused by climate change that concern most the population are first, the increase in temperatures, followed by the decrease in rainfall and heat waves. However, the results show that there is also a certain lack of knowledge in the basis of climate change, with concepts such as like greenhouse effect and global temperature increase. Therefore, it is recommended to implement actions to help the population understand these basic concepts, through information, awareness and participation processes. Regarding adaptation measures that could be implemented in Goikolarra, the surveyed population has prioritized actions related to the rehabilitation of buildings and the management of drinking water.

In terms of communication, there is a certain degree of disuse of local media, which translates into most of the population being unaware of climate change related initiatives developed in the municipality.

The results of the survey show that only a limited number of people have accessed financial incentives (such as subsidies or tax relief) in the past ten years, and that most of them were aimed at housing rehabilitation, tax exemption or reduction, or social help. Among the causes, they mention that there has not been enough publicity of these incentives. To improve this situation, it could be beneficial to search for communication channels that reach the public when promoting these types of measures.

2.2. Landako (Amurrio)

In the neighborhood of Landako, the questionnaire was answered by a total of 126 people. The sample of the surveyed population consists, for the most part, of people over 60, with a diverse

level of studies, predominating professional training. Their survey group is mainly retired, and they reside in properties occupied by 1 or 2 people. Only a small group of them participates in municipal associations.

The results of the survey show that the population is very concerned about climate change, and that they consider it to be caused mainly by human activity. However, it is also observed that there are some knowledge gaps regarding the causes of climate change. Therefore, it would be advisable to reinforce the training of concepts such as greenhouse effect and global temperature increase, through information, awareness and participation activities. In terms of adaptation solutions, the population prioritizes drinking and gray water management as the main solutions to address climate change in their neighborhood. This is linked to the great unease shown by the population due to the climate projections, which indicate a decrease in rainfall and an increase in temperatures in the municipality.

Although most of the population is unaware of the existence of climate change related initiatives developed in the municipality, there is a relatively frequent use of local media. Therefore, when communicating about climate change and adaptation to citizens, the media such as the local press should be considered, Amurrio's municipal bulletin "Hauxe da" and social networks such as Facebook could be utilized, as these are the means of communication most used by the population surveyed in this municipality.

Regarding the access to incentives, the surveys show that there is a very small percentage of the population that has accessed them in the past ten years. This is mainly due to a lack of need for this type of financial aid. The few people who received the economic incentives used them mainly to rehabilitate their homes. Therefore, it is recommended to study the real needs of the population to reformulate the incentives that are currently offered, in order to offer incentives the population would most benefit from.

2.3. Balmaseda

In Balmaseda the questionnaire has been completed by 545 people, most of whom are between ages of 35 to 60, or under 18 years of age. The surveyed population, in general, has a minimum level of secondary education (baccalaureate) and are either studying or employed. Most of them own their houses, which are occupied by 3 or 4 people. The great majority of the population does not participate in any municipal association or committee.

The sample of surveyed population perceives climate change with major concern and considers that it is mainly caused by human activity. However, it is observed that there is a considerable percentage of the population that thinks that climate change is exclusively caused by nature. Therefore, a certain lack of knowledge of the basic concepts about this phenomenon is perceived. To respond to this knowledge gap and to encourage the population to act, it is necessary to promote training in climate change adaptation through participatory information and awareness-raising processes. The main concerns in the municipality on the consequences of climate change are linked to the decrease in rainfall and the increase in temperature. The surveyed population considers nature-based solutions the most effective way to adapt to climate change in the municipality.

The results reveal a scarce use of local media, which leads to a general lack of knowledge about the climate change initiatives that the municipality carries out. In any case, the main local media

consulted in the municipality are the local press and the city council's website. Therefore, these are the means that could be used to raise awareness of climate change and encourage adaptation actions.

The percentage of population that has accessed incentives in the last ten years is small, mainly due to lack of need. In order to make incentives more interesting for a greater number of people, it could be useful to study the real needs of the citizens and provide incentives aimed at alleviating them.

2.4. Arantzazu / San José (Legazpi)

In the neighborhood of Arantzazu / San José (Legazpi), 87 surveys were carried out, mainly involving people over 60. All the people surveyed have completed a minimum level of primary education and they are currently retired. Most of the population lives in their own properties with 1 or 2 people, and only a limited number of the surveyed population participates in municipal associations.

The results show that people in this neighborhood are very concerned about climate change and have a certain level of knowledge on its causes, since they identify human activity as its main cause. However, they lack basic knowledge related to other climate change concepts, such as the greenhouse effect and global temperature increase. This lack of knowledge explains the fact that no one in the municipality is taking action to adapt, which could be solved through awareness and training activities. The main effects of climate change that concern the surveyed population are a decrease in precipitation and an increase in temperatures. According to the perception of the surveyed people, the most necessary adaptation actions in the neighborhood would be the rehabilitation of buildings and the management of gray and drinking water.

Local communication is positioned as a medium used daily by a large percentage of the people participating in this study. However, only a limited number of the population knows about initiatives developed in the municipality in relation to climate change.

There is a small percentage of participants who have been able to access financial incentives in recent years, mainly due to the lack of clarity and publicity of the information due to the organizations promoting them. In this context, to promote knowledge on climate change adaptation, as well as to publicize and explain financial incentives in a simpler way, it is recommended to use the local press and the city council website, since they are the most used means of communication in Arantzazu / San José (Legazpi).

2.5. San Ignacio / San Martín (Legazpi)

In the San Ignacio / San Martín neighborhood (Legazpi), the questionnaire was completed by 99 people. The profile of the surveyed population corresponds mainly to people between ages 35 to 60 or over 60, who have a minimum level of primary education and who are either employed or retired. Most of them live in properties with 3 or 4 people and do not participate in municipal associations or committees.

The surveyed population is concerned about climate change, but there exist knowledge gaps in regard to its causes. This could be solved through information, awareness and participation

activities related to this matter, which in turn is the preferred option by the municipal population to promote citizen action in climate change adaptation. The population's main concerns regarding climate change are related to the increase in temperatures and the decrease in precipitation. To adapt to climate change, most surveyed people believe that the best options are the rehabilitation of buildings, as well as the urbanization and design of public spaces.

Regarding communication, most of the responses indicate that climate change related initiatives developed in the municipality are unknown by the population. The main forms of local media utilized by the local population are the local press, word of mouth and television, which could be used to increase knowledge about municipal initiatives on climate change.

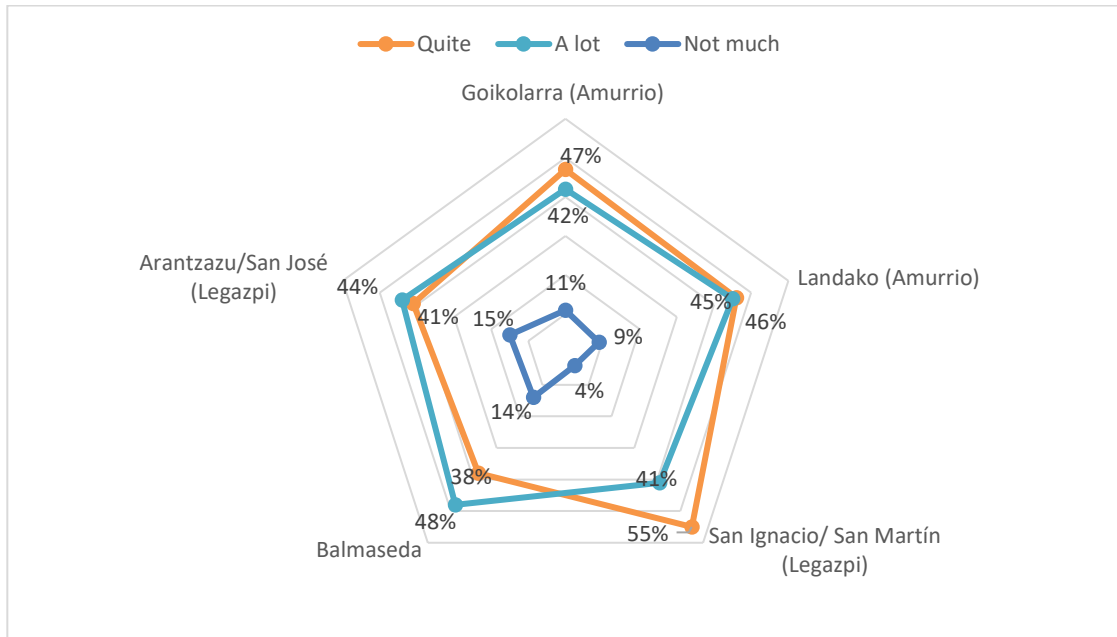
As for financial incentives, there is a small percentage of the population that has accessed them in the last ten years, which is mainly due to a lack of need and a lack of publicity. Therefore, it is considered useful to carry out a study of the population's real needs, in order to adjust the supply of available incentives and achieve greater interest in them.

3. Comparative presentation of the survey's main results

The following is a comparative analysis of the results from all the results by neighborhood, considering the key questions for each section of the survey: climate change, communication and incentives.

3.1. Climate change

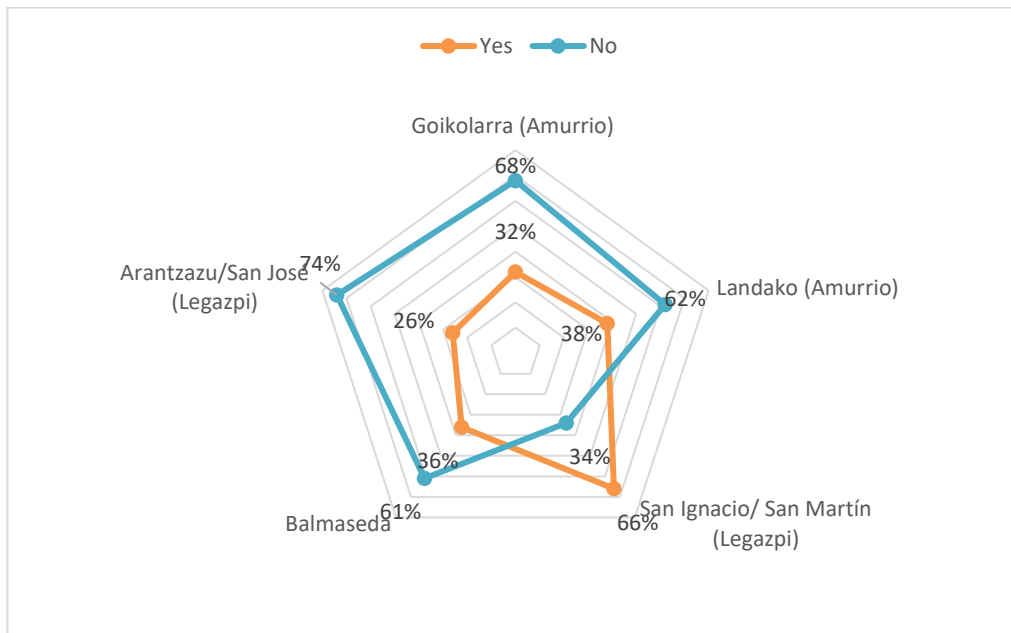
The results show that, in general, the surveyed population cares quite a lot or a lot about climate change. This characteristic is similar in the five neighborhoods where the survey was conducted. It should be noted that in San Ignacio / San Martín (Legazpi), there is a greater difference between the people who are quite concerned (55%) and very concerned (41%) about climate change. In Balmaseda, on the other hand, there is a greater number of people who are very concerned about climate change (48%), compared to those who are quite concerned (38%).



Graphic 1: Degree of concern of the surveyed population due to climate change. Source: Original elaboration.

3.2. Communication

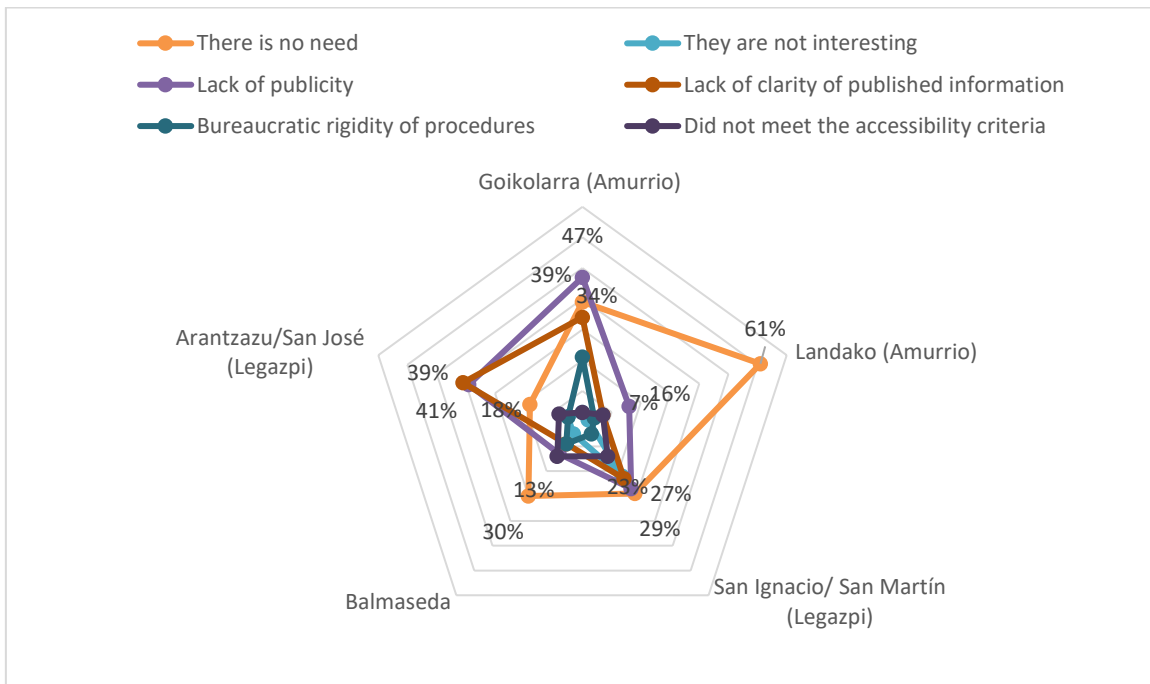
The communication analysis on climate change reveals that more than half of the people who answered the questionnaire do not know where they can go to consult issues related to climate change in their municipality, which contributes to the general lack of knowledge of the initiatives carried out in the city council to fight against climate change at a local level. However, in San Ignacio / San Martin (Legazpi) a different trend is observed, since 66% of its surveyed population knows where to consult this type of initiatives, compared to 34% who do not.



Graphic 2: Percentage of the surveyed population that knows where to consult climate change related questions in their municipality.
Source: Original elaboration.

3.3. Incentives

The overall results of the survey reveal a series of different reasons that explain why the population has not accessed any subsidy, tax relief or other financial incentive in the last ten years. However, there are some reasons that prevail over the rest: the lack of need, the lack of publicity and the lack of clarity in published information. On the one hand, in Goikolarra (Amurrio), the lack of publicity (47%) is the main reason behind the fact that the surveyed population has not benefited from an incentive. On the other hand, people surveyed in Landako (Amurrio) (60%), Balmaseda (30%) and San Ignacio / San Martín (Legazpi) (29%) indicate that they have not accessed the economic incentives because they believe they have no need for them. Finally, the population of Arantzazu / San José (Legazpi) has not benefited from any incentive, mainly due to the lack of clarity in the published information (41%).



Graphic 3: Reasons why the surveyed population has not benefited from any incentive. Source: Original elaboration.

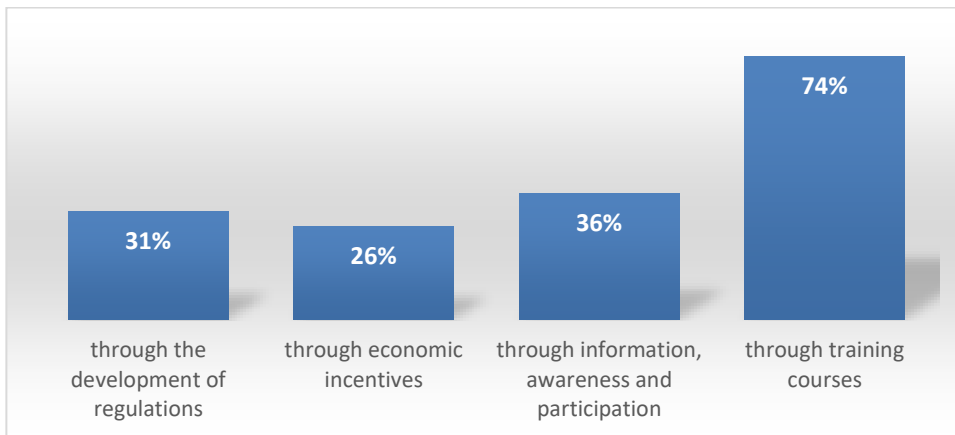
4. Overall results of the survey

This section offers a summary of the overall results of the survey, taking the results of the entire population sample as reference.

The surveyed population is mainly comprised of people who fall into one of two age groups (35 to 60 or over 60). The survey group has a minimum level of primary education and they are either employed or in retirement. In turn, the people who have answered the survey reside mainly in residential properties which they own, with 3 or 4 people and, in general they do not participate in municipal associations or committees.

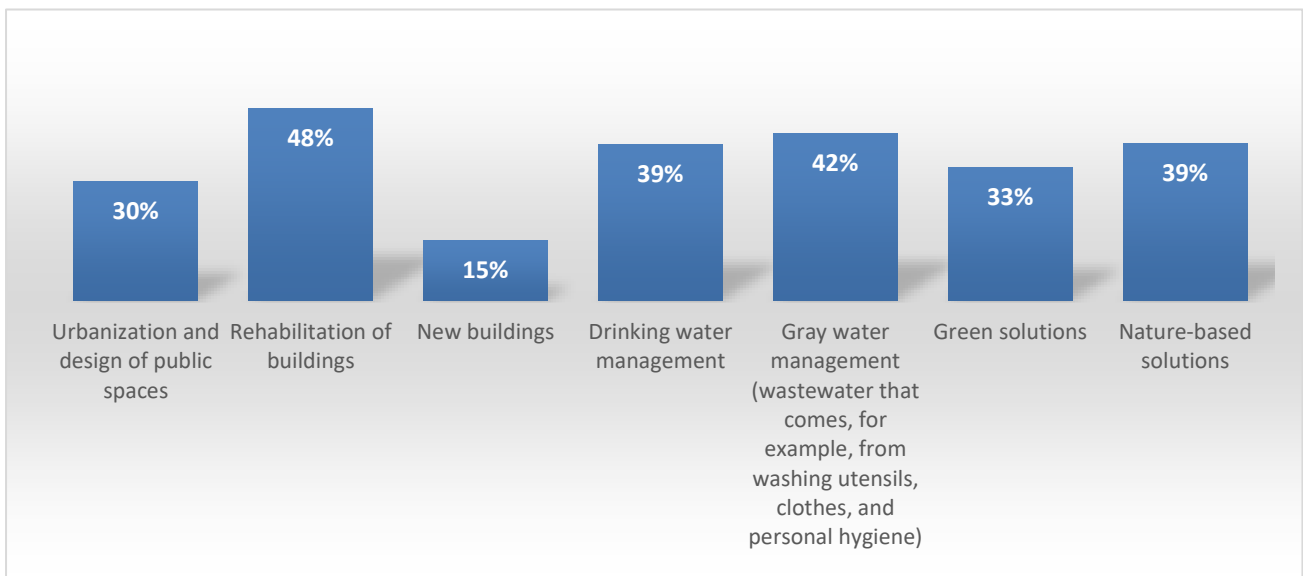
The results of the survey show that the participants are very concerned about climate change and identify human activity as its main cause. However, when their basic knowledge of climate change is analyzed, it is observed that their understanding of these concepts is not clear and there is a certain degree of misunderstanding when defining climate change. The population thinks that an increase in temperature, decrease in precipitation and increase regularity of heat waves are the effects of climate change and will become increasingly dangerous in their municipality.

Most of the surveyed group considers the dissemination of information, awareness and public participation in processes (74%) as the main activity which could be used to successfully promote citizen action to deal with the effects of climate change. To a lesser extent, they consider the implementation of training courses as another activity which could be used to promote citizen action on climate change (36%).



Graphic 4: Ways in which the surveyed population thinks they could be prepared to face the effects of climate change. Source: Original elaboration.

When defining adaptation actions, it is interesting to uncover the priorities that the surveyed population considers essential to protect themselves from climate change. The population indicated that work should be done to rehabilitate buildings (48%), manage gray water (42%), manage drinking water (39%) and to utilize nature-based solutions (39%). These solutions are clearly related to the climate change threats that the population considers to be most relevant to their municipality: the increase in temperature and decrease in precipitation.



Graphic 5: Solutions that the surveyed population thinks are needed in their municipality. Source: Original elaboration.

In terms of communication, the results show that the local press, the city council's website, word of mouth, television, radio and social networks are the most used types of local media by the surveyed populations, so they could prove to be useful when communicating about adaptation actions or publicizing economic incentives.

In relation to incentives, the surveyed population has not accessed them mainly because they believe that they have no need for it, but also because they believe that there has been a lack of publicity and clarity in the information. In this context, it could be useful to study the real needs of citizens and provide incentives oriented to the current demands of the residents of these municipalities.