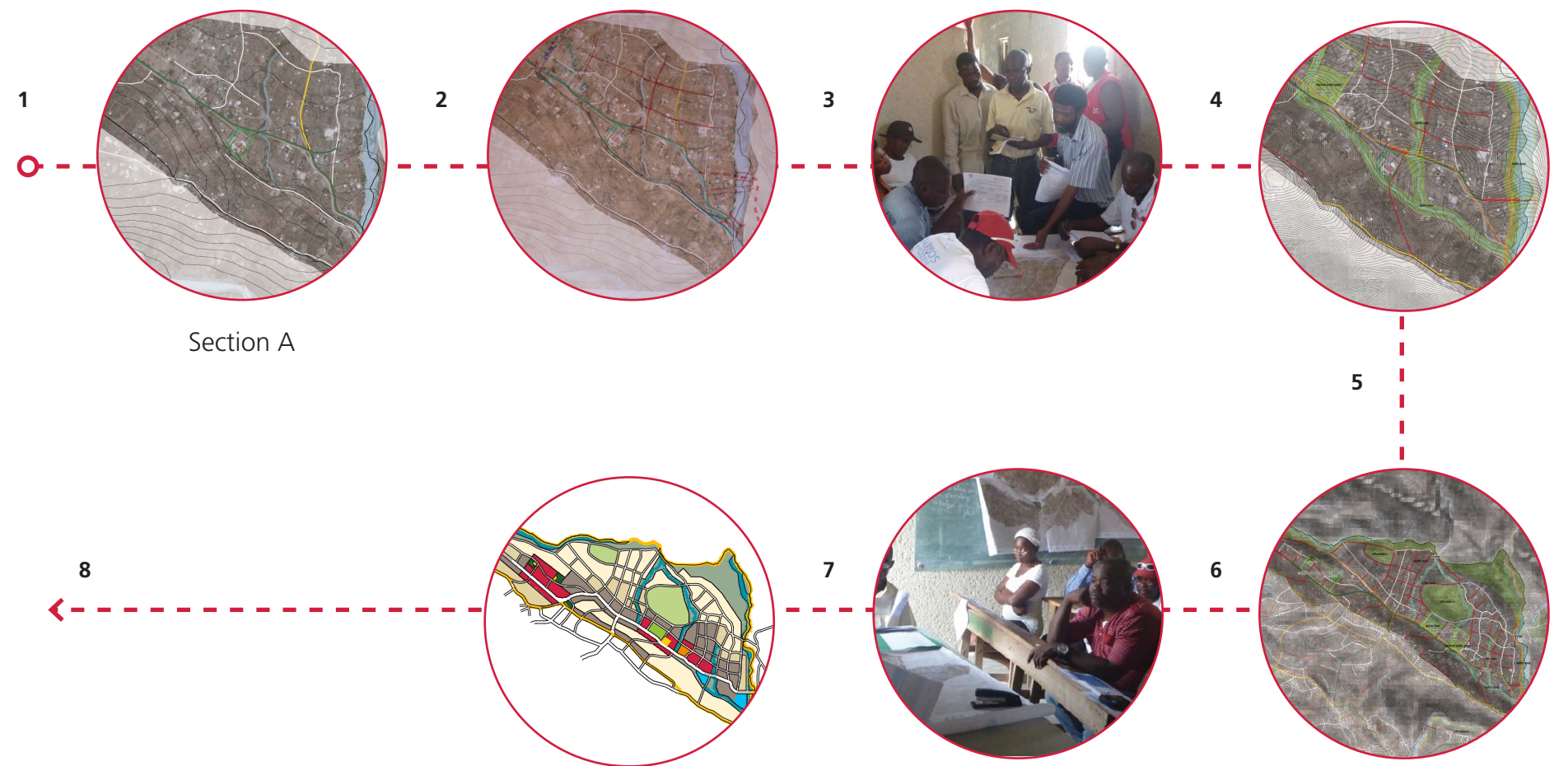


Hautes Sources Puantes lies in the northern part of the central area of Canaan land. The neighbourhood is one of the less dense in the area where just 3,000 people live there. The houses are spread all over Sources Puantes and are interconnected through secondary streets. The open spaces are abandoned and open the possibility for further development in the neighbourhood.

UN-Habitat followed the similar participatory approach as for the rest of the neighborhoods. The process begins with mapping the existing reality of the neighborhood. The proposal for each neighbourhood, is based on the input of the community, stakeholders and residents which is involved in the different phases of the evolving planning and design process.



1. Mapping the existing situation
2. Mapping proposed interventions
3. Community workshops

4. New proposals draft
5. Selected interventions map
6. Neighbourhood assemblies

7. Draft of land use plan
8. Charrette and implementation

Fig.164: Hautes Sources Puantes: participatory planning process

A. STREET NETWORK

The street network is not well structure and does not have a hierarchy. The number of secondary streets is really low leading to congestion in the future if the growth remains the same. Most of the existing roads lead to a dead-end. Appropriate measures for the roads in steep areas were been elaborated in the mobility report.

The new street network suggest in having an arterial road that crosses the neighbourhood from the South-East to the North-west of Sources Puantes. This road holds economic potentialities and will increase the accessibility to new employment opportunities. The steep slopes limit the con-

struction of roads, and therefore only one main road is proposed in the South where the topography is moderate. Inside the neighbourhood, the area will be interconnected by secondary roads. Different width for the different types of roads are defined (A and B, see below). It is not only suggested to propose new roads, but the upgrading of the existing ones is highly recommended. The street network of Sources Puantes will witness an increase of 17.5%.

Existing situation
Streets percentage
UN-Habitat: 30%

6%

Streets km/sq.km
UN-Habitat: 18 km/sq.km

9.4 km/sq.km

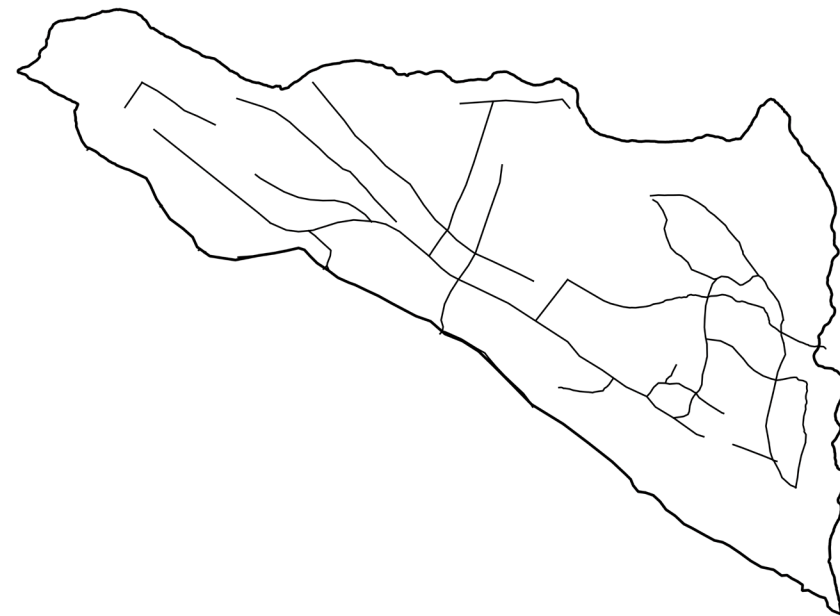


Fig. 165: Sources puantes: existing street network

Proposed street network
Streets percentage
23.3% -Option A
Arterial road: 24m
Main roads: 18m
Secondary streets: 12m

- Option B
Arterial road: 18m
Main roads: 12m
Secondary streets: 9m

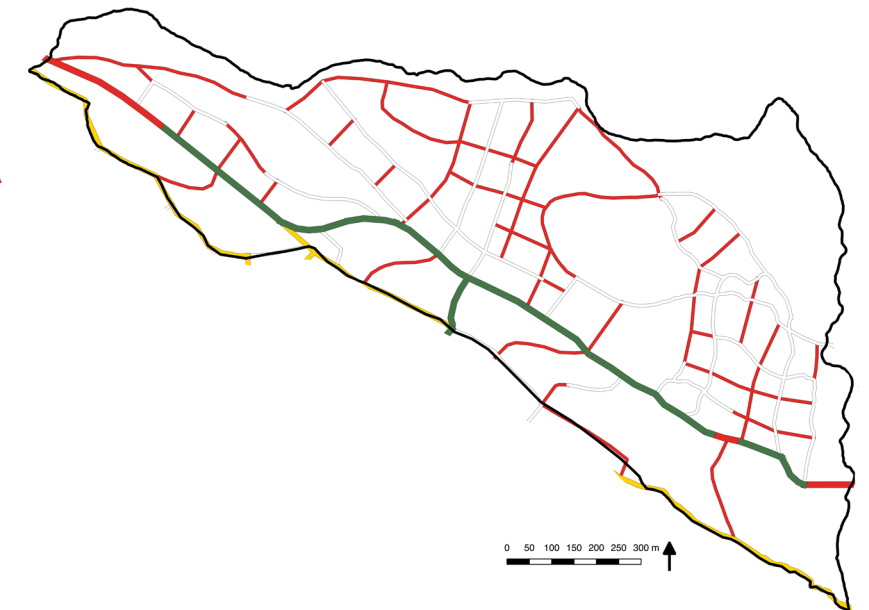
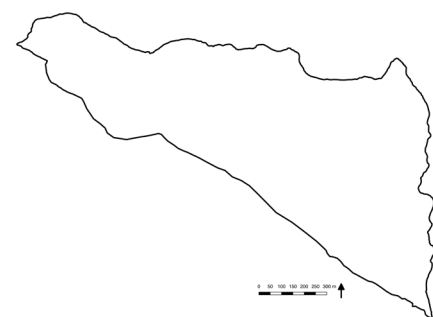
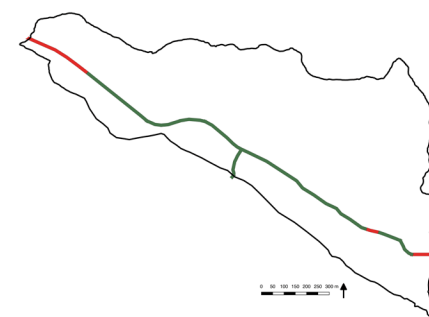


Fig. 166: Sources puantes Proposed street network

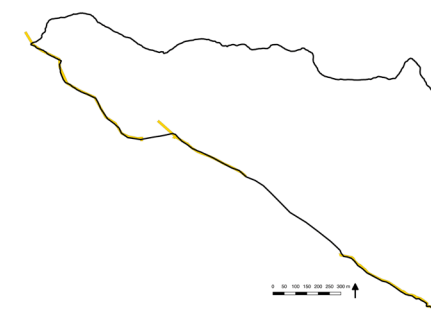
Layers of the proposed street network



National road



Arterial road



Main roads



Secondary streets

Fig. 167: Sources puantes: Layers of the proposed street network

B. PUBLIC SPACES

Existing Public Spaces



Fig.168: Sources Puantes: Existing Public spaces

Proposed by the community

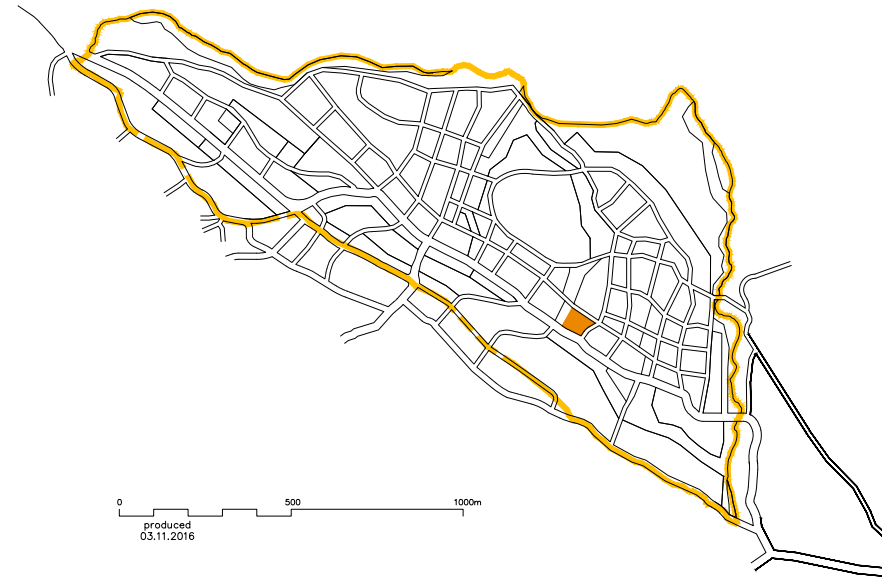


Fig.169: Sources puantes: Public spaces proposed by the community

Proposed by UN-Habitat LAB

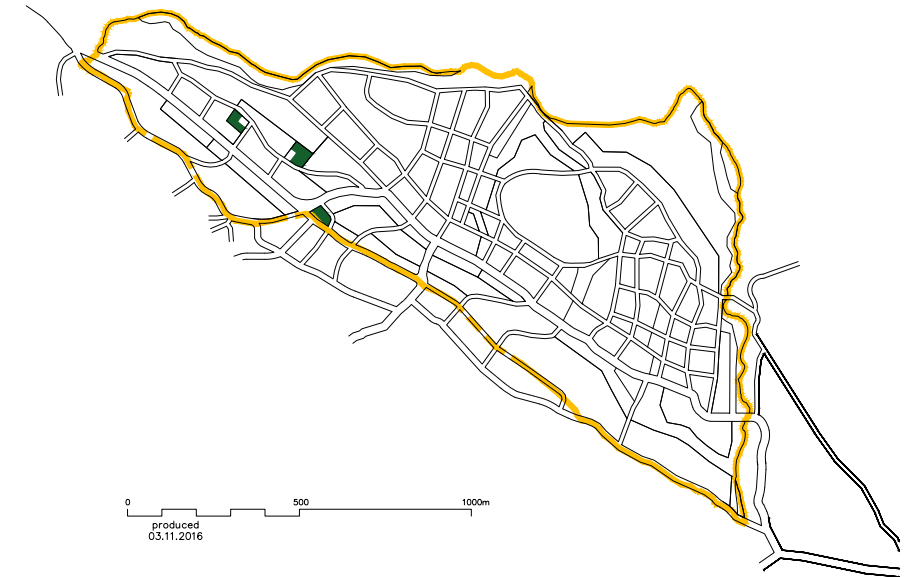


Fig.170: Sources puantes: Public spaces proposed by UN-Habitat LAB

#	PUBLIC SPACE IN HAUTES SOURCES PUANTES	STATUS	NAME	m2	%
	Neighbourhood area			1,230,994	100%
1	Soccer field	Existing		7,500	0,61
				7,500	0,61
2	Public space	Proposed by the community		3,900	0,32
				3,900	0,32
3	Public space	Proposed by the LAB		1,835	
4	Public space	Proposed by the LAB		2,700	
5	Public space	Proposed by the LAB		1,684	
				6,219	0,51
		TOTAL:		17,619	1,43%

Table 31. Sources puantes: Percentage of public spaces

There is only one existing public space in Sources Puantes. Since the current football court only occupy 0.61%, more public spaces should be considered in the new plan in order to reach UN-Habitat's recommendations. It is then essential to preserve vacant lands for the purpose of developing public usages.

During the neighbourhood assemblies, a new space of 3,900 m2 was designated as a public space but the total percentage remained low. UN-Habitat therefore allocated three other spaces in the northern part to ensure an equitable repartition. Adding the proposals of the community to the Lab's ones, the percentage of public spaces will increase of 1HA.

The area on both side of the ravines presents a high environmental risks. The risk of flooding is very high and therefore a distance of 30 metres from both sides will be designated as a protection buffer zone. These areas were designed with the potential of becoming public spaces in off-rainy seasons. If the proposals are put in place, the total number of open spaces will reach 17.6%.

#	PUBLIC SPACE IN SOURCES PUANTES	STATUS	NAME	m ²	Ha	%
	Neighbourhood area			1,230,994	123	100%
Public spaces				17.619	0,018	1,43%
8	Buffer areas next to ravine	Proposed by the LAB		27,300	0.027	
9	Buffer areas next to ravine	Proposed by the LAB		42,592	0.042	
10	Buffer areas next to ravine	Proposed by the LAB		130,210	0.13	
Total:				200,102	0.2	16,26%
Total open public spaces:				217,721	21,7	17,69%

Table 32. Sources puantes: Total percentage of public spaces

The World Health Organization (WHO) recommends 9m²/inhabitant

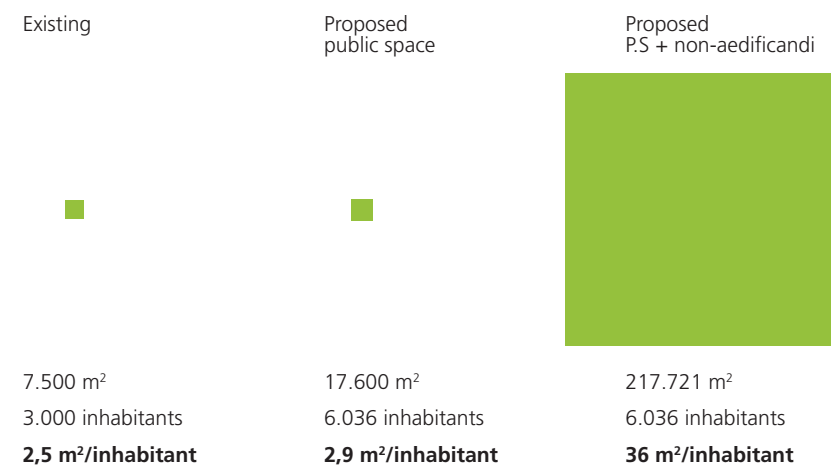


Table 33. Sources Puantes: Public space area per inhabitant diagram

Proposed public spaces with 400 metres buffer

- Existing public spaces
- Proposed by the community
- Proposed by UN-Habitat LAB



Fig.171: Sources Puantes: Overall public spaces' land use and buffer area (400m)

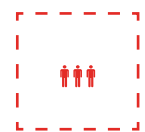
C. RESIDENTIAL AREAS



1.23 km²
Neighbourhood area



3,000
Inhabitants
(source ARC household survey 2016)



2,440
people/km²

Existing residential areas

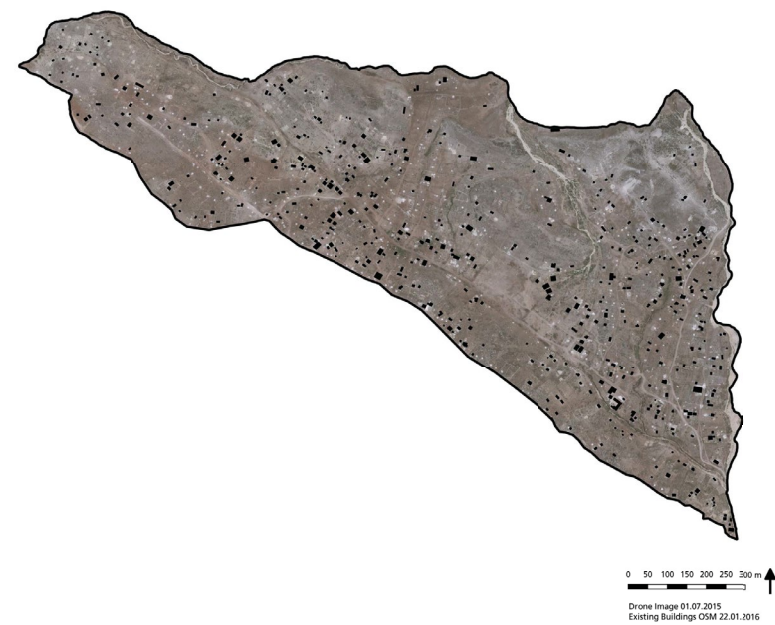


Fig. 172: Sources Puantes: Existing settlements

Hautes Source Puantes is a neighbourhood with low density. Having a population of 3,000 people and an area of 1.23km², the density of the neighbourhood is of 2.440 inhabitants per km². The settlements are anarchically repatriated. They are found

Sources puantes
Population growth

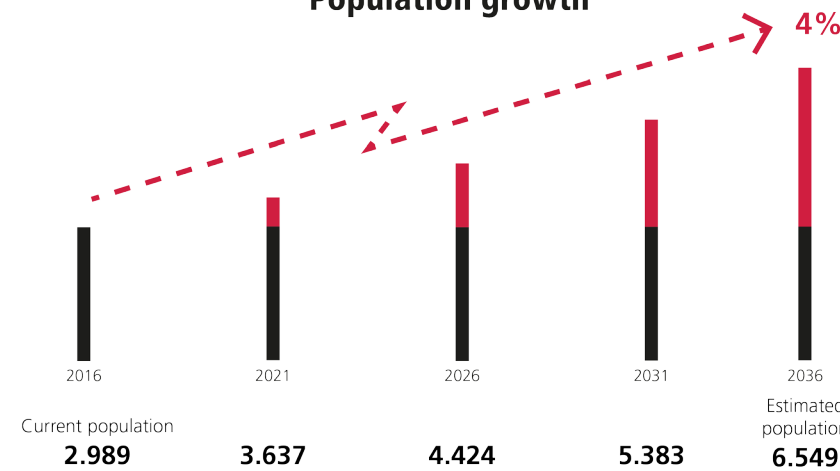


Fig. 173: Sources puantes: Projected population increase

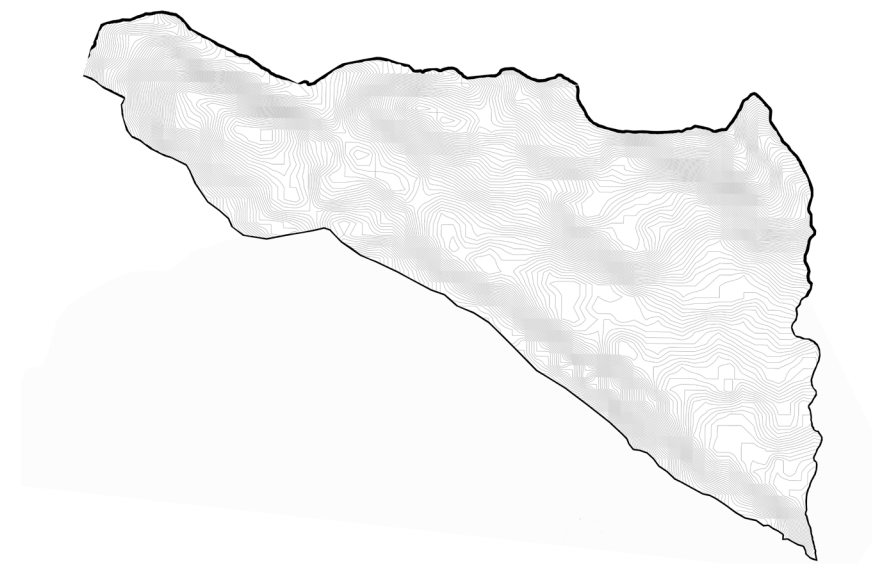


Fig. 174: Sources Puantes: Contours

mostly next to accessible roads. The topography is complex in the north where the slopes becomes steep leaving no possibility for development to happen.

Proposed densities

Low density

Most of the low density areas are found in the north of the neighbourhood where the slopes becomes challenging. Considering a density of 8,000 inhabitants per km² for this category, Hautes Sources Puantes will be able to host 2,616 people. The houses in this classification are often connected to secondary streets. It is possible to have small commerce provided their connection to pedestrian paths.

Medium density

The medium density areas in the new plan are not many. They are in proximity of high density areas and from just 11HA of the total neighbourhood's area. The topography is moderate and densification of existing low density zones into medium ones is therefore feasible. The plan proposes in having 12,000 people per km² in this category which means 1,332 inhabitants will be able to live in Source Puantes.

High density

The location of high density areas is concentrated in the centre of the neighbourhood and in proximity of the proposed arterial road. UN-Habitat recommends to have 15,000 people per km² in this category. This means that a study of plot resizing and modification needs to be carefully conducted. Noting that the high density areas form 33Ha, Hautes Sources Puantes will be able to accommodate 2,097 people.

In the upcoming 20 years, and if the population growth remains

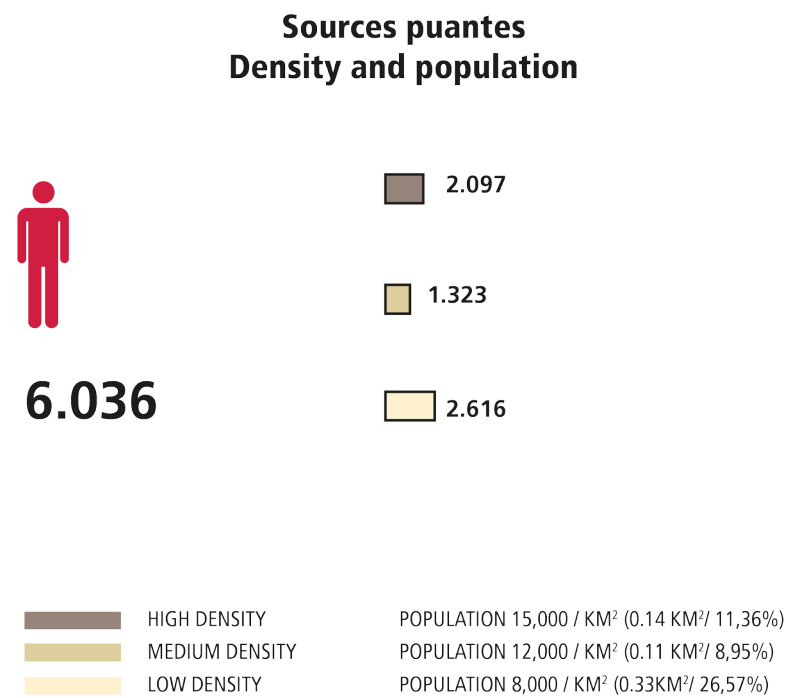


Fig.175: Sources Puantes: Diagram of population in the new proposed residential areas.

of 4%, it is expected that the current population of 2,989 will reach 6,549 inhabitants. The densification, as proposed in the new plan, will be able to host 6,036 people which is not sufficient. One saturated, the medium density areas will need to be more densified in order to respond to the population growth demand.

The presence of economic activities in the residential areas is highly encouraged on condition to have a direct access to the roads. The size of commercial activities depends on the types of roads and the density of the area; the higher the density, the bigger the commerce and vice versa. The compactness of the city is induced by the integration of different usages into the urban fabric.



Fig.176: Sources puantes: Residential areas and proposed densities

D. COMMERCIAL AREAS

● Existing commercial

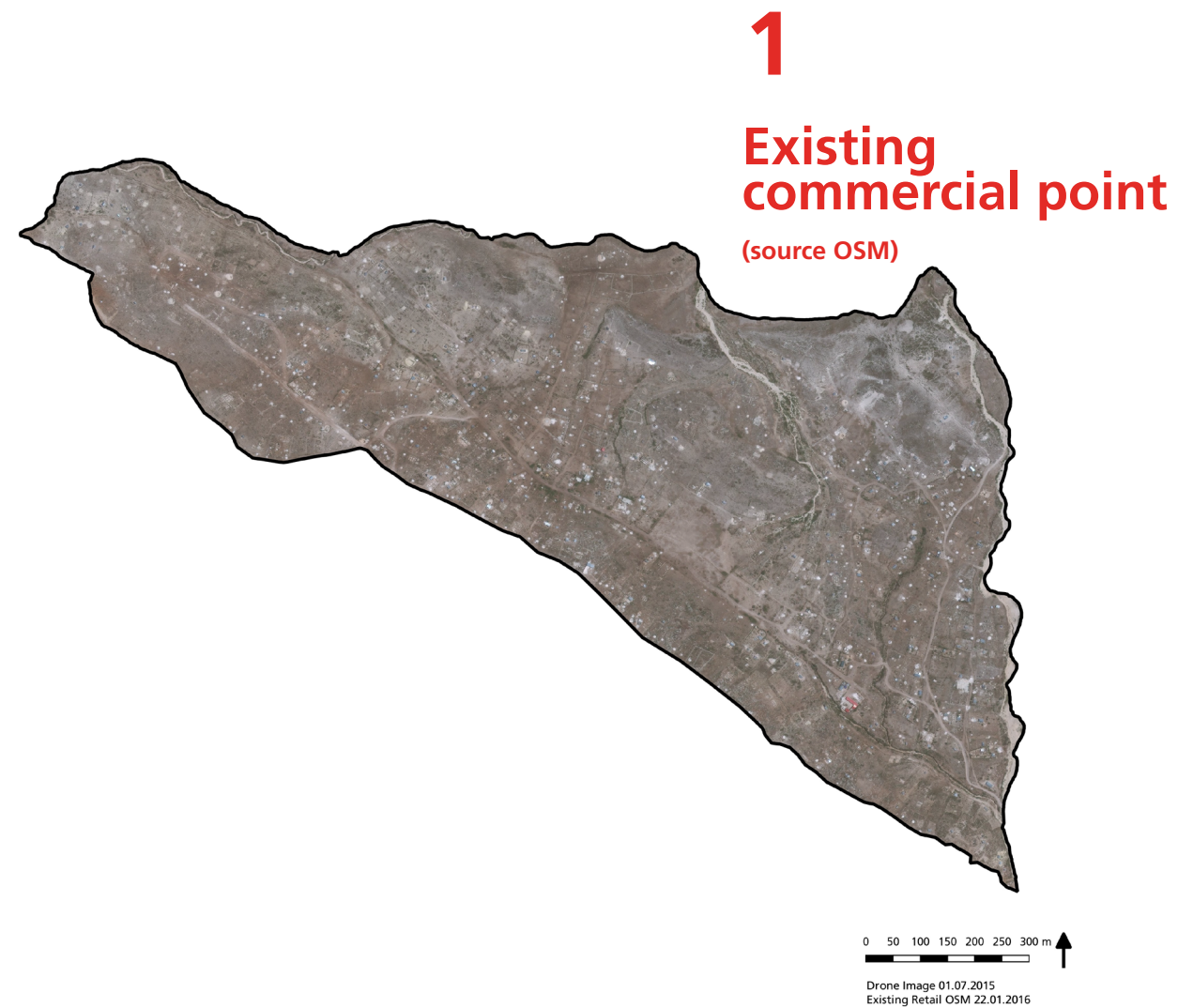


Fig.177: Sources Puantes: Existing commercial points (Source: OSM)

According to OpenStreetMap, there is only one shop in Hautes Sources Puantes. In order to enhance the local economy, it is essential to provide further commercial activities and encourage commercial streets. The location of these services is very important; the decentralization of these services and the good planning of street network will increase employment opportunities for the residents.

■ Proposed commercial areas (mixed-use)

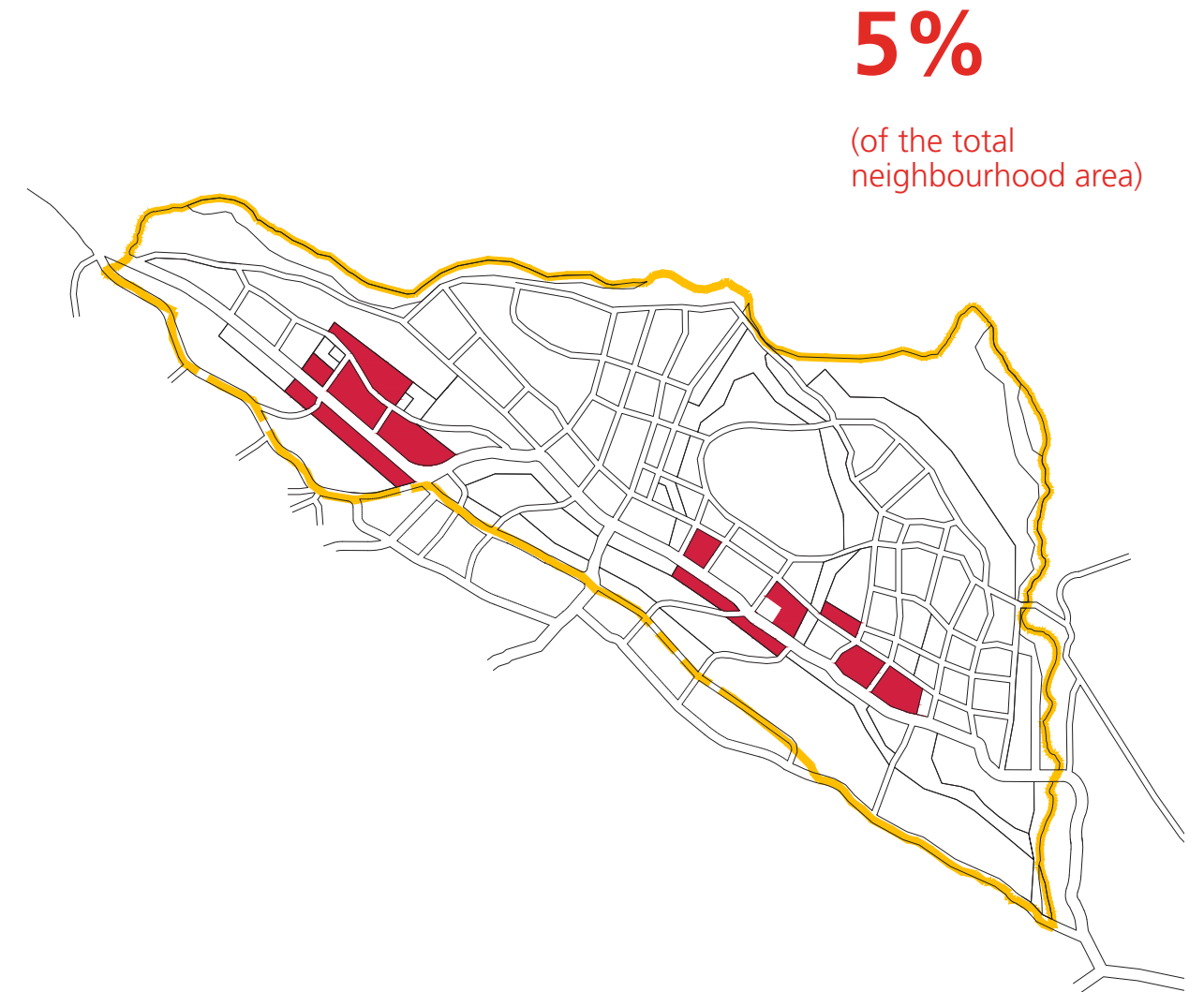


Fig.178: Sources Puantes: Proposed commercial areas

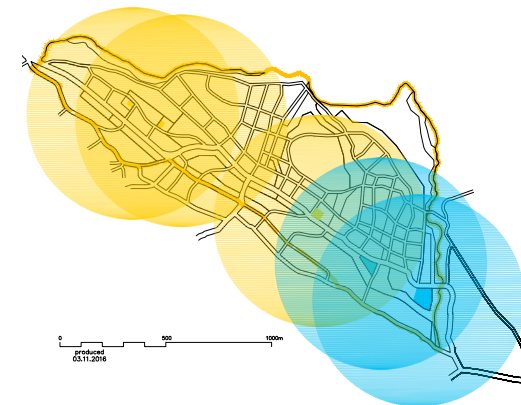
In the new plan, the commercial areas will be facing the proposed arterial road. They will occupy the ground floor and will have direct access to pedestrian paths. These activities have the potential to generate a new, highly diverse sector within the local economy, with opportunities for job creation. They therefore act as catalysts for initiating a structural transformation. The proposed commercial areas will occupy 5%.

E. PUBLIC FACILITIES

- RELIGIOUS - EXISTING
- EDUCATION - EXISTING
- HEALTH - EXISTING
- OTHER PUBLIC FACILITIES - EXISTING



Fig. 179: Sources Puantes: Existing public facilities and a 500m buffer catchment area.



There is only one educational facility in Hautes Sources Puantes which is located in the south. The data has been validated with the community but there is still a lack of information about the types of schools (primary, secondary, etc.). It was a challenge to predict the required number of facilities for the population. Education plays a major role in reducing poverty and inequality. For that, it is always advisable to reserve certain land for the extension of existing facilities and/or for the provision of new schools. The area contains 2 places of worship situated in the north. No in-

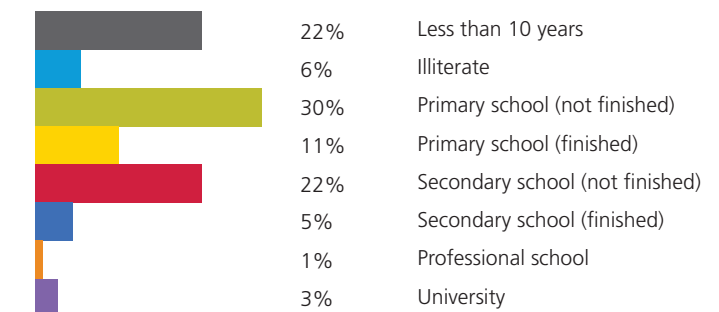


Table 34. Sources Puantes: Participation level (Croix Rouge Americaine, Juillet 2016)

formation is available about health services, community centres, security stations and others. For planning purposes, and in order to have a long-term sustainable city, it is essential to consider the services mentioned in the new design of the neighbourhood. Generally, these services require good accessibility and therefore their location must be well studied. Normally, it is recommended to locate them within 500 metres from the settlements so that they are easily accessible.

Once the information is updates, the plan should be reconsidered and more public facilities should be added.

Fig. 180: Sources Puantes: Existing public facilities

F. NATURAL RESOURCES AND ENVIRONMENT

The no-built areas and natural zones form 22% of the total neighbourhood's area. Two spaces in north (see map #6 and 7) are to be defined as reforestation area. Considering their location near the ravines, this will help in decreasing the risk of flooding and landslides. A 50 metres' buffer area from both sides of the ravine will be designated as a protection area in means to prevent all risks. These buffer areas were designed with the potential of becoming public spaces in off-rainy seasons.

The no-built areas will occupy 22% of the total neighbourhood area.

#	No-built areas	m ²	Ha	%
	Neighbourhood area	1,200,000	120	100%
6	Reforestation	17,070	1,7	
7	Reforestation	54,330	5,43	
8	Buffer areas next to ravine	27,300	0.027	
9	Buffer areas next to ravine	42,592	0.042	
10	Buffer areas next to ravine	130,210	0.13	
Total:		271,502	0.27	22.06%

Table 35. Sources Puantes: Total percentage of no-built areas

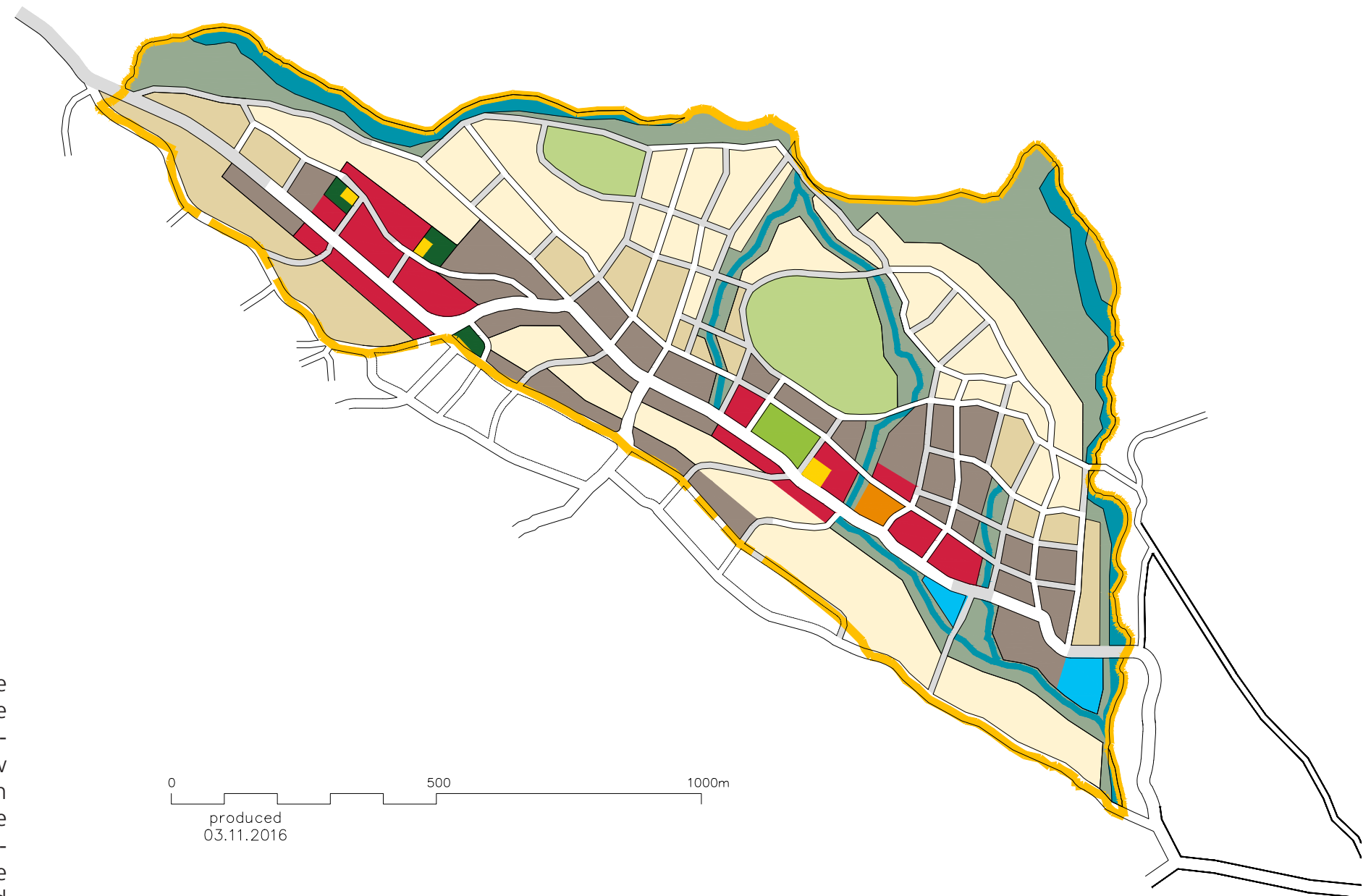
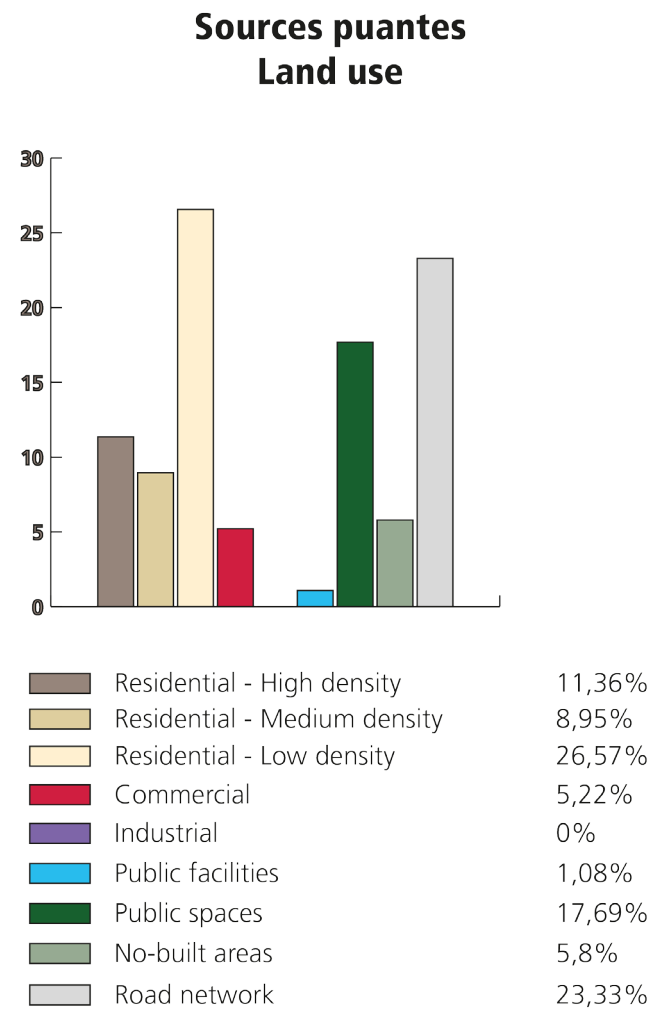
Legend

- Proposed buffer zone along the rivers and ravines
- Proposed area for livestock grazing
- Proposed area for reforestation
- High environmental risk areas
- Existing rivers and ravines
- Quarries



Fig.181: Sources Puantes: No-built areas

G. SOURCES PUANTES LAND USE



The assemblies, facilitated by the UN-Habitat team in Haiti, identified the main needs of the residents of Source Puantes. The proposed land-use plan is the result of the ongoing participatory process with the community. It responds as much as possible to their needs and proposes new ideas that can induce prosperity and sustainability. Even though the plan addressed the issues of land uses and increase the street network, the public spaces and commerce, public facilities however remain insufficient. An elaboration of the plan is essential once all the information are provided. To ensure Sources Puantes' sustainability, it is recommended not to further densify it.

The plan was reviewed as a whole, taking into account the neighbourhoods nearby and how they connect. It is mandatory to situate each of the individual neighbourhood plans in the whole Canaan area to achieve a coherent and rich structure.

Fig.182: Sources Puantes: Proposed land use plan