

ADMINISTRATIVE AND SPATIAL EVOLUTION OF YAOUNDE TOWN FROM 1898 TO 1992

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ABSTRACT

Yaounde became political capital of Cameroon in 1909. Before this period Douala was appointed as capital in German rule, followed later by Buea.

Before French colonial rules, many reasons (volcanism at the foot of Cameroon Mountain in Buea, seism etc.) brought German and later French colonial power to preferred Yaounde to Buea and Douala.

Since then, this small station became successively a cosmopolitan town of 1.500.000 inhabitants in 2002. This formidable growth is the result of the conjunction of two main elements:

- A yearly natural growth rate of the town (4%) greater than Cameroon demographic mean growth rate (2.3%).
- The migratory balance rate of 4-5% each year during 20 years.

This paper focussed on the inordinate expansion of the city since its foundation as well as the analysis all the problems linked to this excessive enlargement.

Key words: Cameroon, GIS, mapping, spatial extension, waste products, Yaounde.

1 – INTRODUCTION

Cameroon territory was discovered in 1472 by Portuguese navigators after reaching Douala, the main coastal entry town. The country receives its name from Wouri River called Shrimp River (Fleuve des Crevettes, Mveng, 1985). So historically the name Cameroon, called in German “Kamerun fluss” derive from Wouri estuary. The territory that grows around this estuary take the German name “Kamerungebiet” and its headquarter (capital) “Kamerunstadt”. Anything becomes Kamerun and much confusion raised up. So, German colonial power signed, the 1st January 1901, a decree giving the name Douala to the entry town and the name Kamerun to the whole country. This protected territory called “Schutzgebiet” in German holds three main headquarters:

- 1885-1909: Kamerunstadt that became Douala in January 1901
- 1901-1909: Buea situated at 900m of altitude at the foot of Cameroon Mountain. This town called “Schloss” (Castle or Château) by colonial Governor Von Putkamer (1895-1907), was the symbol of power of great colonial companies. Unfortunately, the 1909 Cameroon earthquake breaks down this project in favour of Yaounde.
- Since 1909: Yaounde.

This paper, which focussed on this spectacular spatial increase of the town linked to its formidable population growth aimed to map out the spatial and administrative evolution in relation with the historical context of creation of Yaounde town.

2 – METHODOLOGY

We use a lot of material that we collect anywhere to realise this work. First of all, we collect scattered existing data on map of Yaounde town. We refer to aerial photographs of Yaounde in 1965, 1974, 1990. We use topographic map of Yaounde 1/200000 and 1/50000. We collect numerical census data (1957, 1976, 1987) and estimate projection of population of Yaounde in 1990 and 2000 that we compute using EXCEL. A simple evolution rate has been made with

this equation: (Equation 1 : $ER = \frac{(X2 - X1)}{X1} \times 100$)

We calculate a spatial and population variation index using the formula:

(Equation 2: $VI = \frac{X2}{X1} \times 100$)

Selected historical data came from Yaounde National Archives (YNA) and selected maps of urban fabric from Yaounde Urban Council (Communauté Urbaine de Yaoundé). As mapping is concern, we used ENVI 3.6, MAPINFO 7.5 and ADOBE ILLUSTRATOR 9.0 software. After all, we compared the result with Spot 5 satellite imagery of Yaounde in 2000.

3 – RESULTS AND INTERPRETATION

3.1 - Historical context of Yaounde foundation

Yaounde was founded in 1887 by German Lieutenant Kund Tappenbeck who reaches the town at the end of the year 1887. This equatorial rainfall village situated at 750m of altitude, became In 1889, a military station used by German colonial rules to fight against slavery trade. In 1894, the German Major Hans Dominik transform this single village of 300 original Ewondo (name of local people that give it name to the town by German transcription: “Jaunde”) into a great military centre that could allowed him to cover the whole country eastwards and northwards. This military fortress that possesses an insignificant area, lodging facilities and population at the origin, became in 1909 the Capital of the whole Cameroon. According to Mveng (1985), Kengne Fodouop (2001), and Bopda (2003), the former village that burn the city, carry only 50 straw huts around German fortified concession (5huts).

The official transfer of the administrative function of the Capital city was done in March 23, 1921 after the First World War (1914-1918), by Tappenbeck. Many reasons explained the definitive choice of Yaoundé under German or French rules. For it central position at the heart of the country (3°47 – 3°56 N and 11°10 – 11°45E); its sweet climate; its geostrategical position (200km from the coast and surrounded by hills), the great forest development and the great role of cross road for slavery trade and portorage originating from Central Africa to the Coast and from Oubangui stretching to the north.

Administrative and political institutions have since the foundation provoked a great unbounded spatial extension of urban fabric. The town become inordinate and carries today more than 269,000 accommodations with more than 1,500,000 inhabitants on 14,500ha with a variety standard of life and housing qualities. With such a huge population and its economic weight, Yaounde is the second important town of Cameroon after Douala.

3.2 – Review of African cities growth

While the majority (62.1%) of the African population is still rural, urban growth rates at nearly 4 per cent a year are the most rapid in the world, and nearly twice the global average (United Nations Population Division 2001). Growth rates are predicted to average 3.5 per cent per year over the next 15 years, meaning that Africa’s share of the world’s urban population will increase from 10 to 17 per cent between 2000 and 2015 (United Nations Population Division 2001).

North Africa is the most urbanized sub-region with an average urban population of 54 per cent, followed by West Africa (40 per cent), Southern Africa (39 per cent), Central Africa (36 per cent) and the Western Indian Ocean islands (32 per cent). The least urbanized sub-region is Eastern Africa with only 23 per cent of the population living in urban areas (United Nations Population Division 2001).

3.2 – Main steps and indicators of Yaounde spatial growth

Cameroon (Central Africa) holds with Nigeria, Ivory Coast (West Africa) Democratic Republic of Congo, the richest and the densest urban networks of black tropical Africa. After Independence in 1960, all the Cameroon towns have increase gradually doubling and tripling for some. However, Douala and Yaounde hold the most spectacular increase rate and carry more than 45% of the urban population of Cameroon. According to Kengne Fodouop and al. 2000, Yaounde population has been multiplied by 16 with a demographic growth rate of 7.3% in 37 years. From 1960 to 1997, it benefits 800,000 inhabitants more (fig.1a). One can see on the graph the three main demographic growth steps:

- the first one between 1926 and 1967 show a simple natural growth end by a floor in 1967-1976
- the second one between 1976 and 1985 ended by a second floor in 1985-1987
- the last one characterized the actual growth since 1987

Even though if the population has increase thrice between 1933-1952 and 1952-1957 (fig.1b show the growth rate trend), the twice increase of 1967-1976 and 1987-2002 (fig.1a) was excessive and the growth curve is much straightened. The situation is coupled with a great rural exodus since 1960 that brought in the Yaounde 71.8% of it urban population (Kengne Fodouop & al. 2000).

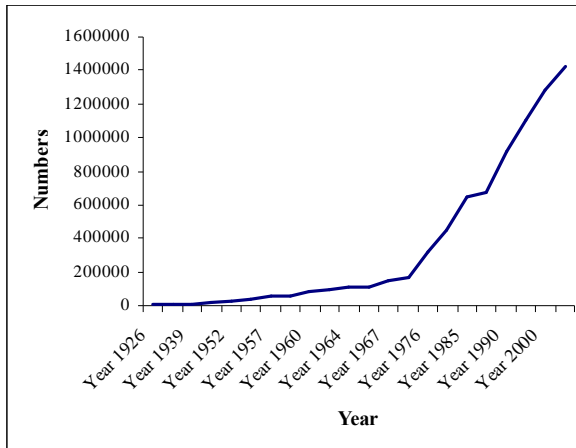


Fig.1 - Yaounde Population trends

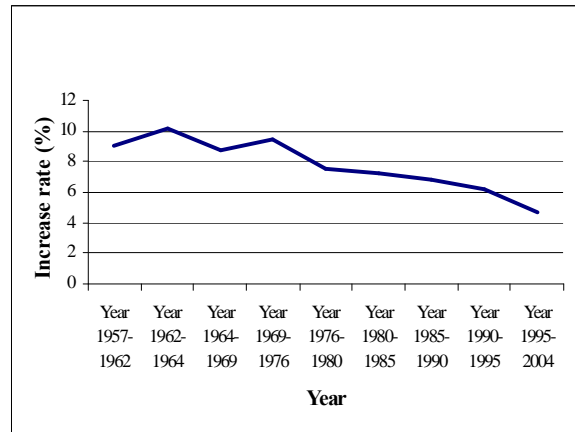


Fig.2 - Yaounde Population increase rate since 1957

Demographic pressure (growth) is the main indicator of unbounded spatial increase of developing countries' towns. Because the urban demographic growth acted as multiplier effects of increasing inadequate Housing Street lights facilities, road network system, water supplies, offices and urban councils. So from 2500ha in 1967, the total built area of Yaounde raised to 3570ha at the end of 1997. Thus, spatial increase of the town has being multiplied by 4 in 30 years (fig.2a, b). The comparative index and growth rate in percentage on population growth, area increase and area per inhabitant show a great spatial evolution of the town and the decrease of total area per inhabitant. This constitutes an announcement of crisis in lodging facilities and housing in Yaounde.

This exponential growth makes the town bigger and bigger with a great axis of 25km (Kengne Fodouop & al.2000) from North to South and nearly 10 km from west to east (fig.3). This figure shows the type of spatial growth of the town. From the military fortress of 1889, each urban quarter of Yaounde grown up from village status assimilated or swallowed by the town. It is called agglutinated expansion because villages are gradually engulfed by the urban "magma". This formal increase doubled each 20 years beginning from a linear development linked to road facilities and ending by nuclear settlements related to the multiplication of housings and infrastructures.

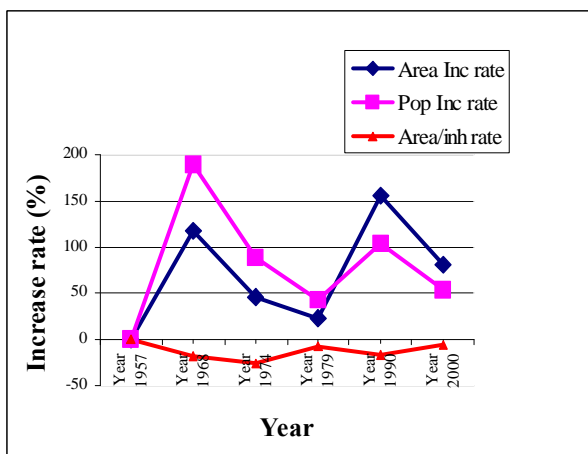


Fig.2a Comparative increase rate of Yaounde (population, area and area per inhabitant) since 1957

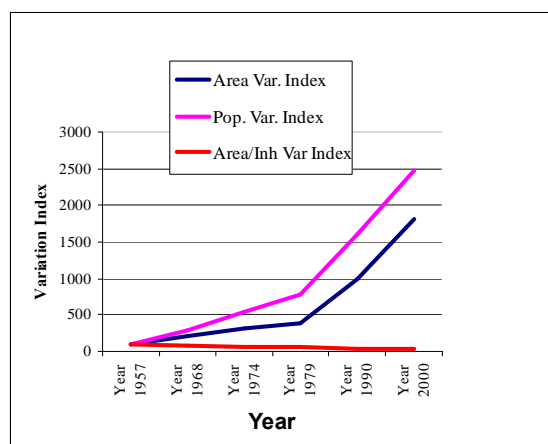


Fig.2b Comparative variation index indicators (population, area and area/inhabitant) of Yaounde

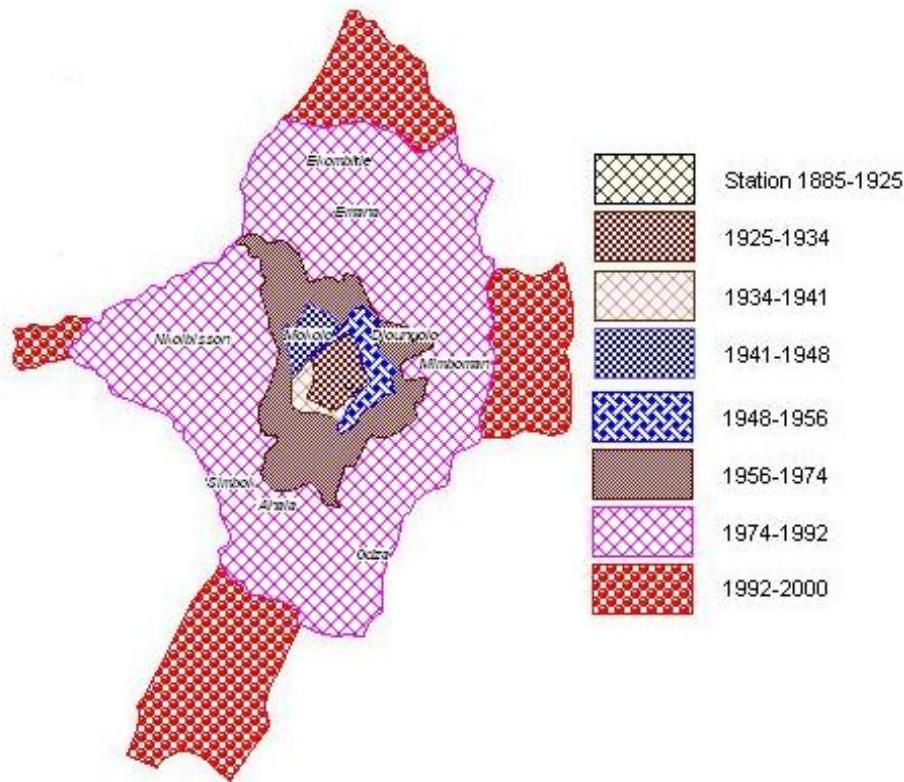


Fig. 3 – Spatial growth of Yaounde since 1885. (Source: compiled from Bopda 2003, Spot satellite imagery (2000) and Landsat satellite imagery 1988).

3.2 – Administrative growth

This demographic and spatial growth explained the administrative growth of Yaoundé because of the increase of political functions and institutions. Administrative evolution in this main chief town has many stakes:

- fight against rebellion
- to break down of homogeneous ethnical groups
- electoral matter.

Due these factors, Yaounde town passed from 4 subdivisions to 6 subdivisions since 1992 (urban councils, fig. 4) namely Yaoundé I to Yaoundé VI. This splitting is closely linked to the demographic growth of the town. Urban councils were created by the 1987 law N° 87/015 (15 July 1987). The phenomenal increase of the number of ministries as well as administrative facilities and building favoured the situation. So only the core town remains unchanged with numerous ministries (blank spaces of figure 5), the town spread in all sides.

4 – DISCUSSION AND PERSPECTIVES

Such a spatial historical urban enlargement could not achieve without problems. Those problems are aggravated by the lack or the poor means and planning tools. Urban council could not succeed in getting under control the whole town. Horizontal expansion of the town could be explained by three main reasons:

- The lack of urban education and civilization
- The poor great building height
- The weak of social housing programs

The main problems encountered while wandering through the town are:

- Spatial saturation of the town that brought the lack of housing
- Hill top deforestation and destruction of forest front cover screen that protected and allowed clean air to the city-dwellers and favour air and water pollution
- The lack of green space (14ha for 10000 inhabitants) and lack of low cost housing

- Inordinate and uncontrolled expansion of this cosmopolitan city with informal settlements
- Floods as results of shanty town and spontaneous inadequate housing increase in the ecological fragile zones. This is closely due to the densification of accommodation causing surface waterproofing from which floods derived. One can add to this the increase of overcrowding and crime
- Difficult urban waste management and poor provision of infrastructure such as roads, street lights, water supplies, sanitation etc.
- Deficit of social accommodation (70000 units in 2003) that brought misery. More, the proliferation of unplanned settlements in the urban areas of Africa has been accompanied by inadequate provision of potable water and sanitation (WHO and UNICEF 2000).
- Increase of poverty; poor town-dwellers occupied marginal zone (steep slope, natural drainage waterways) which are unaffected to building (a field survey identify more than 1000 housing to be pull down in the ecological fragile zones). This illegal occupation of marsh zone explained the distribution of landowner title and building permit. There is illegal occupation of industrial zone such as Cameroonian Society of Petroleum Products in Yaounde where 200 people were killed by fire in February 14, 1998.

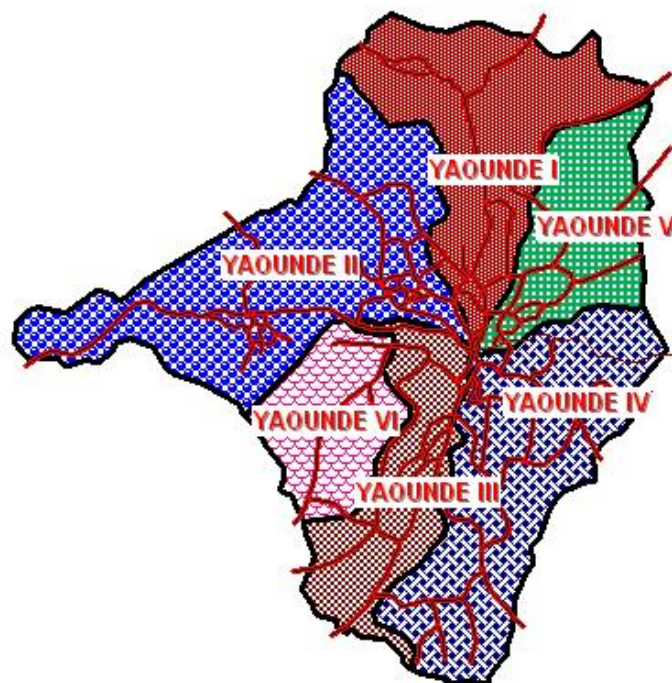


Fig.4 - Yaounde urban councils

The recommendation of this work could be summarized in two purposes:

- Stopping the urban extension of the town by courageous, voluntary and determined planning measures because the city enlargement is so fast that it should shortly reached the new International Airport of Nsimalen that was build in 1994 (just 18km far from Yaounde). One can see in the satellite imagery of 2000 were Nsimalen and the housing spreading along the street leading to Nsimalen (fig.6a&b)
- Creation of satellite and new towns around Yaounde in order to bind its spatial enlargement. So urban council could reinforce urbanization front from these new or satellite towns (Mbalmayo, Okola, Evodoula, Mfou, Obala, Mbankomo).

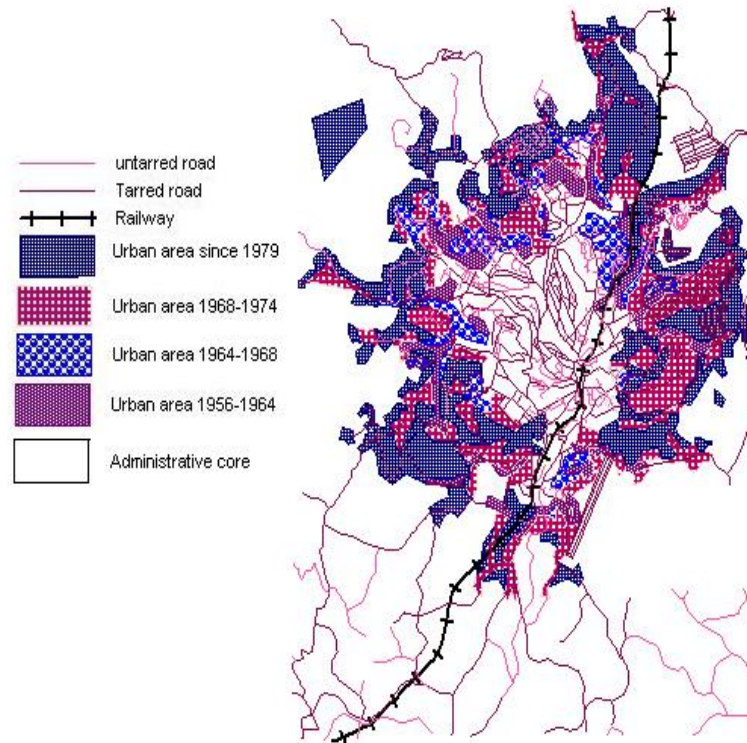


Fig.5 – Yaounde Urban area since 1956

5 – CONCLUSION

The visualization of SPOT satellite imagery of Yaounde (in 2000) compared to Landsat TM satellite imagery of the same town (in 1988), figure 6 a&b, shows and confirms this phenomenal extension compared to the evolution of urban perimeter since 1956 (fig.5). Our paper redrew the administrative and spatial evolution of the town. The aim of this historical and development cartography using GIS method is to help planners, decision makers and political power to understand, to control and to bound the spatial inordinate and excessive expansion of this developing country town in order to get under control the relevant problems that faced the town such as: sustainable demographic growth, urban floods, shantytown multiplication, management of domestic waste, etc. Because of slow economic growth in many African countries, lack of sound development policies and an increasing number of small households, infrastructure development has been unable to keep pace with the burgeoning need for shelter and services for growing urban populations. As a result, many African cities have an increasing number of overcrowded, informal settlements, or 'shanty towns', characterized by inadequate housing and poor provision of infrastructure such as roads, street lights, water supplies, sanitation and waste management services. Often these settlements are developed on fragile environments such as steep slopes, natural drainage waterways and flood-prone areas. Inadequate housing and settlement design can also contribute to declining security and increasing levels of crime in African cities (Shaw and Louw 1998).

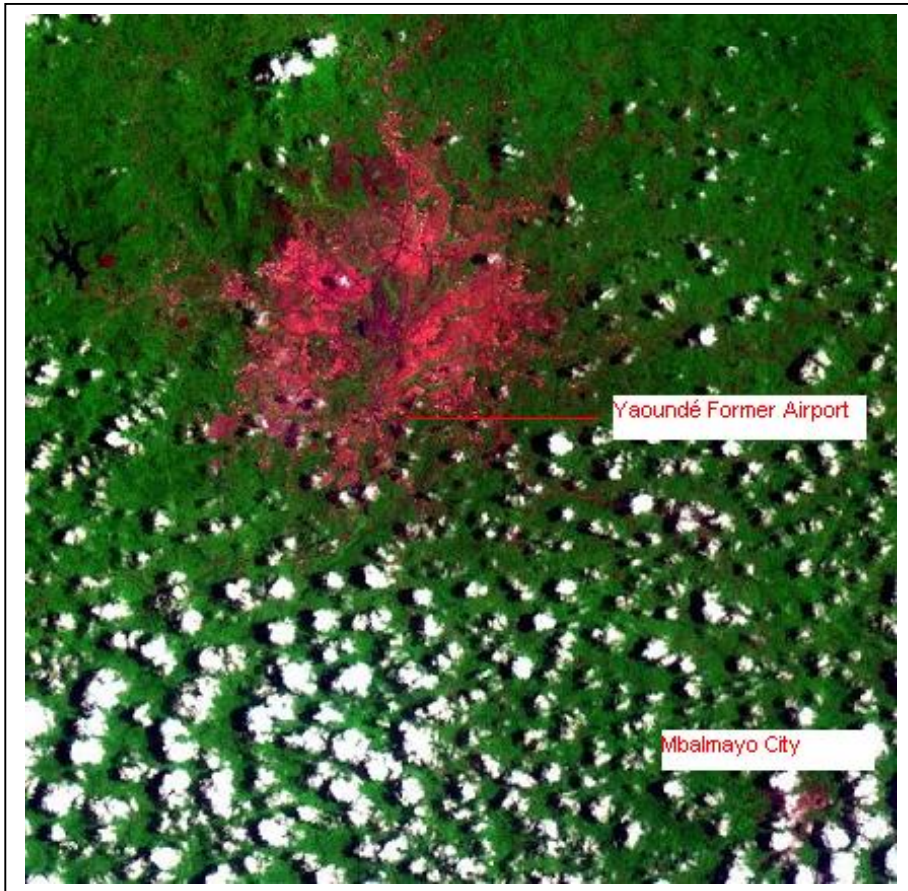


Fig.6a – Yaounde City in 1988 (Source: Landsat TM (6-4-2 bands)).

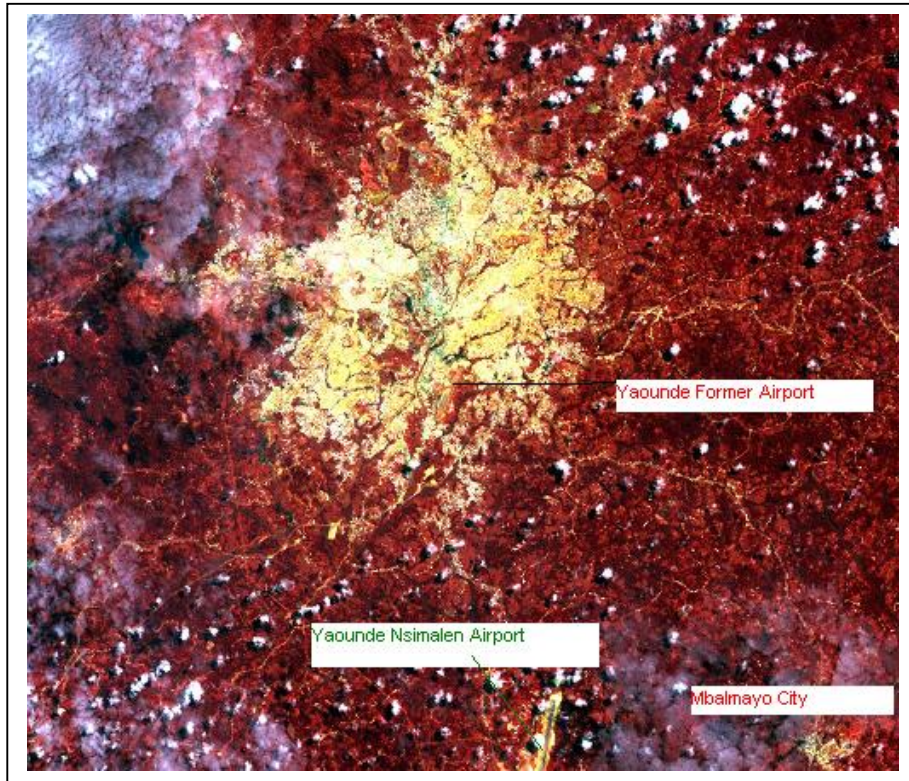


Fig.6b – Yaounde city in 2000 (Source: SPOT 2000; 5-3-1 bands)

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BIOGRAPHY OF DR MESMIN TCHINDJANG

Dr Mesmin Tchindjang was born in Douala Cameroon on August 26, 1961.

Title: Holder of:

1- Ph.D thesis in Geomorphology in 1996 at University of Paris 7 in France entitled: The Central Bamileke Plateau and its surrounds: Regional morphology and slopes dynamic, Geomorphological study. The thesis dealt with Relief, Surface dynamic and Natural Risks.

2 – Master of Sciences in GIS (Methods and Techniques of Management of Environmental Information) at University Omar Bongo Ondimba of Libreville Gabon.

Function:

3 - Senior Lecturer in University of Yaounde I Cameroon, Department of Geography. My teaching domains in University of Yaounde concern: Geomorphology, Cartography and Remote Sensing, Environment, Tourism and Eco tourism.

4 – Associate Lecturer in Geomorphology and Remote Sensing at ENEF; Libreville Gabon.

Experiences:

- General Secretary of The National Geography Committee of Cameroon.
- Member of ICA working Group on Colonial Cartography
- Member of IGU working group on cultural geography
- Founding Member and coordinator of CARGIS; a Cameroonian association of cartographers, GIS and remote sensing
- Program Manager and Coordinator of Postgraduate Diploma and Master of Sciences in EIA in CRESA FORET-BOIS (University of Dschang) Cameroon.

Publications:

More than 15 scientific articles focussed on: The weathered pebble of the Bamileke plateau, The geological rock strata in Cameroon, Mining Sand exploitation on the Pan African granite rock of Batie Region, Central Bamileke maars, inundation risks in the Lake Nyos Valley, Erosion and Dissolution potholes on the Lake Nyos pyroclastic dam, tourism and ecotourism. Supervisor (students' research works) of almost 15 Master of Sciences thesis in Geomorphology, Management of Natural and touristic resources, Environment with tourism and Eco tourism, Farming transformation in West Cameroon, Sustainable Management of Fauna specimen (CITES Case) in Cameroon, Inundation and risks linked with shallows occupation in Yaounde town, Remote sensing and ecological prospect of biodiversity on Cameroon Mountains after 1999-2000 eruptions.