

The genesis, methodical foundations, and problems in the realisation of the *Atlas de la Nouvelle-Calédonie*

Abstract

The article presents the main organisational, epistemological, and methodical principles assumed by one of the two scientific editors of the *Atlas de la Nouvelle-Calédonie*, and the problems they faced. The presented solutions may be useful to the authors of similar projects in the future.

Keywords

Atlas • New Caledonia • cartography • Kanak

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Introduction

Following the social disturbances of the 1980s, New Caledonia experienced extensive political, social, and economic transformations. The situation in this territory did not settle down until the Matignon Agreements in 1988. The new administration division, which assumed the creation of three provinces, was a significant stabilising factor. The 1998 Noumea Accord, which opened the way to expanded autonomy with a significant and irreversible transfer of competences, directed New Caledonia to self-determination. Two new nickel metallurgical plants located in the north and in the south of Grande Terre comprised a new economic element.

These significant transformations, which were accompanied by growth of the territory's population and the still visible depopulation of the rural areas, are often explained by the new spatial organisation and the creation of a new society, which still presented visible inequalities, but was much more inclusive than before.

In this context, in 2008, the congress of New Caledonia – the legislative body of the territory with authorisations unique within the French Republic – entrusted the creation and publication of the new Atlas of New Caledonia (Bonvallot, Gay & Habert 2012) to the Institut de recherche pour le développement (IRD) in order to replace the 1981 edition published by the predecessor of IRD - ORSTOM (Huetz de Lemps, Legand & Sautter 1981). Simultaneously, the body employed a geographer-cartographer for almost four years, who had the responsibility to conduct research at the level of the municipalities and who played a significant role accompanying the authors of the Atlas.

Initial state of information and methodical assumptions

Tradition does not set to become a permanent feature. The experience of ORSTOM-IRD in regional atlas edition obviously

should not be an argument to copy such products. However, if the main objective is usefulness, great technological changes benefit the creation of such atlases. Digital cartography and database development allow for quick production of a large number of maps.

Today, numerous local groups are creating and publishing themed atlases on the scale of statistical (administrative) units, taking advantage of census data. There are many maps produced due to this technical simplicity, but they are often poorly structured and do not relate to any issues, which paradoxically favours the production of regional or national atlases, in which the French are not exceptions. On the South Pacific, the Fiji government published a national atlas in 2006 (Walsh 2006) and the New Zealand government provided for the creation of an excellent historical atlas of the county (McKinnon, 1997). Furthermore, the year 2005 saw the publication of the new edition of the *Contemporary Atlas of New Zealand* (Kirkpatrick 2005), while 2009 saw the publication of the *Vanuatu Atlas* (Siméoni 2009).

In such projects, it is important for the work to fulfil the various objectives rarely encountered in the current publishing landscape. The future of regional atlases is conditioned by the need of extensive application and provision of public funding. Thanks to this, the *Atlas de la Nouvelle-Calédonie*, which was published on paper in the 420 x 297 mm format (the Italian version of the A3 format) and independently on DVD-Rom, dedicated to the 33 municipalities of New Caledonia, is mainly a scientific product, which assists in the popularisation of knowledge on New Caledonia. Composed of 60 cartographic charts with commentary, it united the best specialists from various fields and with diverse scientific interests for four years. Their work was evaluated in a similar manner to the evaluation procedures of the publications in scientific journals. The members of the scientific committee of the



Photo 1. The congress of New Caledonia

Source: Gay 2011

Atlas also reviewed the maps and the commentary. This project provided significant experience in data acquisition, particularly at the levels of the municipalities and tribes.

The Atlas is also a popularising work, as the commentary avoids scientific jargon. The included bibliography provides easy access to expanded information and the summaries in English open the publication to the world. It is oriented towards open-minded people, encourages the inhabitants of New Caledonia to explore their territory, and others, particularly tourists, to discover it. Politicians and local activists facing new social and spatial challenges, French and foreign journalists, scientists – they will all find something interesting in the Atlas. The interactive DVD-Rom version of the Atlas (Chauvin & Gay 2014) is a complete didactic tool for teachers and their students. In effect, the knowledge contained within, ranging from local space to larger areas (provinces and the entire territory), the variety of the documents, which include audio and video files, the options for the development of interesting exercises for the students provided to the professors, and the education in seeking information make the Atlas a tool for use at all levels of education.

Considering the above, the arrangement of the Atlas does not differ from tradition in order to not confuse the readers. The work is composed of five parts: "Regional context", "Environments", "Population and its history", "Economy", and "To live in New Caledonia". So the choice of this arrangement is not a bias for Vidalian geographic possibilism.

Despite the fact that in certain ways the new Atlas of New Caledonia is similar to its predecessor published by ORSTOM in 1981, it differs in its considerably smaller format and raises new issues such as biodiversity, ecosystem protection, customary space, cultural life, and information on the municipalities. Therefore, while the canvas seems similar, the content is different and corresponds to the global and local transformations, which have occurred over the past 30 years. New Caledonia has changed. Ecological sensitivity has been born. By receiving responsibility for the country and due to the raise of the rank of the Melanesian culture possible thanks to the administrative division with federal properties, the Kanak people have become the leading actors in development. Favouring the idea of independence, they took power in two of the three provinces. The Atlas recognises this evolution.

The role of the Atlas in the formation of national identity

Located on the antipodes of mainland France, submerged in the process of emancipation, today's New Caledonia is searching for its identity, which is shown by the recent lively discussions on the signs of identity foreseen by the Noumea Accord. Whereas the currency and anthem are not discussed much, the issue of the flag remains unresolved. The current use of two flags (French and "independent") seems to be the lesser evil. In this context, with the 2014 entrance into autonomy, during which the population should be in favour of changing the territorial status from collective to independent state, the creation of an "official" Atlas has acquired special meaning due to the profile of the sponsor, the reputation of IRD and the external partners involved in the work (regional, territorial, and state authorities). In effect, numerous people saw the official symbol of identity of a multiethnic territory seeking a "common future" in the Atlas. This is a big step in learning more about New Caledonia – no longer French, thanks to the legal solutions it received, (New Caledonian Citizenship, "national legislation," preferential solutions for the employment policy), but still not sovereign.

This sense was enforced by the fact that most of the 75 authors of the current Atlas resided in New Caledonia, in contrast to those of the previous one. In reality, regardless of the "piloting committee," which was created spontaneously to support some of the main authors, read the commentary, alter the maps, complete the information, etc., these authors were mainly scientists, teachers, lecturers, or important authority figures, who have been working in New Caledonia for many years. The congress of New Caledonia clearly stressed this local and identity dimension of the work when the contest for the illustration of each segment of the Atlas and its cover was announced to the domestic artists. It was obvious that the New Caledonians would take the challenge.

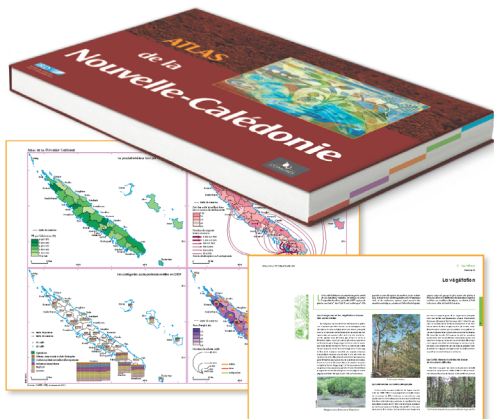
As requested by the government and parliament of New Caledonia, almost 1/5 of the Atlas is occupied by consequent analyses of the conditions of the 33 municipalities. This aspect was almost absent in the 1981 atlas because the municipal institutions were in their early stages of development (the New Caledonia's municipalities appeared in 1969). The current Atlas confirms the appearance of the territorial self-government as a significant element in the understanding of the organisation of the space and everyday life of the territorial inhabitants. There was also special focus placed on the tribes and the customary

Carte blanche à l'Atlas

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Photo 2. Open days for the publication of the atlas at the congress of New Caledonia

Source: IRD 2013

(traditional) space. It was observed that this element was particularly important in the involvement of the Kanak in the work.

The polls conducted in all municipalities have shown that the respondents care about the idea of transferring their lives and activities onto maps according to their perception, and they want to contribute into the creation of the sense of local identity.

All of these factors explain the success of the work, which was published in February of 2013 in Noumea. The edition (2,000 copies) quickly ended and it had to be reprinted. The Atlas was generally considered a success, and one of its famous reviewers, Roger Brunet, deemed it as one of the best in its category (Brunet 2013).

Naming issues

The particular bond between the Kanak (the word is invariable in French) and their territory is likely the reason, for which they found it so simple to comprehend the maps and understand their meaning. The field research in "Brousse" – the word used for rural areas – allowed to determine the interest of the Kanak for the maps presenting the areas of their lives. This astounds Europeans. The numerous assemblies in mayors' offices and tribal villages, particularly those during the phase of validating the maps following field studies, provided the conclusion that the maps were very easy to read for the local community. This was the effect of their language (speech) which is less anthropocentric and more relating to places in space (georeferential). In the Melanesian language, the names of roads and places usually refer to spatial benchmarks (e.g. the dominating with direction, the land/sea contrast), rather than – as is the case in European languages – to the body (ahead/behind, up/down). This rules assigns a special place to space and maps and is enforced by the fact that the land plunder during the colonisation period placed the issues of land value and use in the middle of the debate on the future of the territory. The Kanak have preserved special interest in the names and locations of the clans and tribes due to everything that had accompanied their history – the allocation, banishment to other regions, decomposition, and successive merger of the tribes.

Due to the above, the authors were facing serious problems with the toponymy, since in this area New Caledonia is a mess. The Northern Province has announced a campaign of naming studies and has passed new names, which are already visible on road markers. The Southern Province has undertaken similar challenges with great delay. Therefore, the situation facing the cartographer was complicated, since the documents of the topographic and statistical authorities still contained the French names, whereas the commonly used names were usually Melanesian. This forced the authors of the Atlas to equip the DVD-Rom with a map containing both French and Melanesian names. Nevertheless, this situation was the source of numerous errors.

The case was different when it came to the comprehension and use of the maps by the authors of the Atlas. Most of them were not geographers. Those who were, were often astounded by their inability to imagine the way to present the collected data in cartographic form. Cartography was a useless field to many of the authors and it used a complicated language. In effect, the coordinators of the Atlas had to work with its authors in the selection of the phenomena and the method of cartographic presentation. Certain authors made it clear that they had no interest in the maps, leaving them to the coordinators, who had to make them based on the previously acquired data. Others only knew the basics of cartography and did not understand the suggestions for the cartographic presentation. They all considered the basic rules of cartography (e.g. warm and cold colours, proportionally presented absolute values, generalisation) to be whims of the



Photo 3. Bilingual road sign arriving at a Brousse village

Source : Gay 2010

geographers. However, this incompetence somewhat assisted the operations, as it allowed the coordinators to “spread their wings” and create the charts according to their vision. However, the low knowledge level of the basics of cartography is regretful, despite the skills concerning spatial data. It turns out that frequent use of GIS tools complicates the work of cartographers, since these tools instrument maps, trivialise the modes of cartographic presentations and limit the map to being a bunch of illustrations, replacing synthetic explanations with analyses, which are often in contrast with the text.

The work on the Atlas also produced reflections on the location and the general, often incorrect, use of the maps in other sciences, and in consequence on the significance of successful cooperation between the authors of the maps and the cartographers. In this aspect, the role of the scientific editor is crucial, as he is the one who has to convince the authors that the cartographic image may be a particularly useful tool in the understanding of the scientific and didactic message.

Therefore, the effort in data collection was expanded by the concept on how to add new modes of cartographic presentations to the Atlas. The search for the proper cartographic form, which would appeal to the users, presented a great challenge. This is why the anamorphic maps, grids of squares and their anamorphoses in the Atlas are next to more classic maps. Their positive reception by the authors and members of the scientific committee proves the point of this form of presentation. The texts accompanying the maps were also enriched by triangular diagram maps, bar charts, structural charts, photographs, etc. The fact that these illustrations were often too small is regretful, as the priority was the text, which the authors found difficult to limit.

Difficulties and limitations in the editing process

My experience gained of the Atlas at the start of my professional career while working on the editing team of the *Atlas de la Polynésie française* produced concerns of considerable delay of the work due to the unpunctuality of some of them (Dupon 1993, p. 89). However, there were only sporadic delays in the case of the *Atlas de la Nouvelle-Calédonie*. Even the experienced researchers, most of whom came from IRD, did not miss their deadlines despite having their time limited by productivity requirements and by the bibliometric criteria, which has an increasing impact on their professional careers (while the work on the Atlas was secondary). Their involvement was surprising, which can be explained by the awareness that the Atlas became a great information medium in and on New Caledonia to an institution with financial difficulties and an uncertain future.

However, the three years initially foreseen for its completion turned out to be too optimistic. There is no shame in the addition

of another year, since such momentous projects always see certain obstacles. In the case of the Atlas, there were unforeseen problems with our best partners, with whom we always had great chemistry: the *Institut de la statistique et des études économiques de la Nouvelle-Calédonie* (ISEE). ISEE had trouble with processing the 2009 census data. Ultimately, the results were released in mid-2011 and there was no way to omit them, since the quality of the previous census (2004) was rather poor.

Some of the 60 charts and commentaries were particularly difficult to prepare due to the sensitive political and historical issues. Specifically, this concerned the issues associated with land ownership, administration and protection, the urbanisation projects for the Grand Noumea, and contemporary history.

The entire Atlas was polished and arranged in succession by scientific editors, reviewers, and the scientific committee. Some content is too consensual, not without regret. The work was particularly complicated when it came to sensitive issues, whereas the final results were preceded by long and tumultuous discussions.

The congress of New Caledonia, which partially funded the work, controlled the work through a special liaison providing for communication between the team of scientists and technicians and the local politicians. Nevertheless, despite the fact that certain charts were examined and controlled with special care, the authors of the Atlas are deeply convinced that the politicians did not interfere on the content. The congress of New Caledonia only requested that the Atlas contain a chart concerning the cultural and artistic life of the territory.

Today, when journalists examine the Atlas, their attention focuses on the chart entitled “Événements”. This impression is provided by numerous articles in the french press. When they offered the possibility to create a cartographic projection of the most recent social anxieties and conflicts, I was concerned with the difficulties facing this challenge, as well as the potential effects. At the same time, I recognised the importance of opening a debate on a very relevant topic, which could have been approached too consensual because of the aforementioned “polishing” adjustments. The chart’s author and the other three historians fervently working on the issue decided to rename “Événements” to “civil war.” However, the scientific committee of the Atlas decided that despite the legitimacy of the name for the period between 1981 and 1989, the Atlas is not a publication adequate to contemplate such historical issues. Much like historic or oceanographic journals, its role as a scientific product is not to suggest new theoretical foundations, but to present information. In consequence, the historians were asked to consider various options for the name of the aforementioned period, including the euphemism “événements”, “colonial war”, “independence

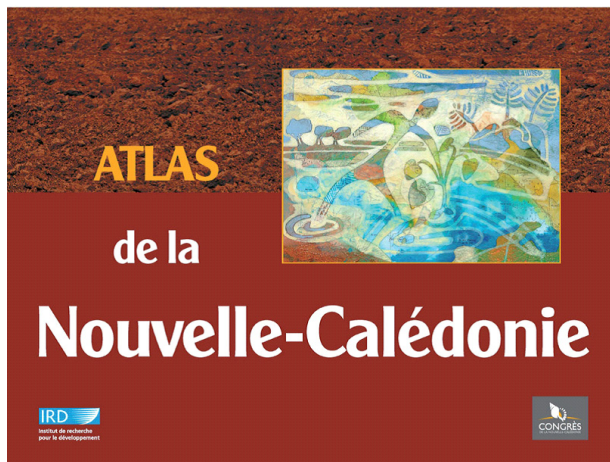


Photo 4. The Atlas de la Nouvelle-Calédonie cover
Source: IRD 2013

war”, or “civil war.” Following complicated negotiations, the title containing the question “événements or war? (1981-1989)” was deemed as the best choice.

On the other hand, there are certain regrets that there was too much initial trust in the representatives of the metallurgic plants, as they were entrusted with the task of preparing five commentaries dedicated to the production and processing of nickel. This was turned into self-promotion, which was very distant from the needs of the Atlas. The texts in question were extensively edited and one of the authors was replaced with a two-person team from the scientific team of the Atlas. The loss of the time associated with said changes, unsuccessful contacts with the initial, frequently changing authors, multiple examinations of the incorrect texts, conceptualisation, etc. was considerable.

Much like during the creation of the previous *Atlas de la Nouvelle-Calédonie* (Antheaume 1981-1982, p. 391), this time the project management was also formed spontaneously. Elizabeth

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Habert, a cartographer and technical coordinator, and Jacques Bonvallot, the scientific editor responsible for the environmental charts and issues related to the production and processing of nickel, were working in the IRD cartography department. The project manager, cartographic partner, most members of the scientific committee, and most of the authors were almost 17,000 km away from Paris. The said distance was a problem, since the biannual scientific councils, numerous journeys, and discussions through modern forms of communication (videoconferences, electronic mail) were not enough to avoid the appearing misunderstandings. The Noumea team was unaware of the appearing technical and financial problems, whereas the Bondy group underestimated local issues. However, these rather sparse organisational problems had no considerable effect on the progress of the work.

The practical advantages of the selected format of the Atlas were appreciated throughout its production. It was considerably different from its predecessors (440 mm x 580 mm for the 1981 *Atlas de la Nouvelle-Calédonie*, 360 mm x 480 mm for the *Atlas de la Polynésie française*), however the objective – convenience – was not completely fulfilled. The main disadvantage is the weight – over 3 kg. It is composed of high- base weight paper, which allows for high-end printing (in France) and the high-quality binding made in Italy.

As it was issued under the IRD, the content of the 2012 Atlas had to be compliant with the requirements of national publications and drop Caledonian French (the terms of which are presented in the glossary) in favour of metropolitan French. Considering the main target group of the Atlas, this choice was surprising.

Conclusion

I wish their successors good luck. The institutional evolution oriented towards full autonomy, division of sovereignty, or complete independence of New Caledonia, which by then could be under a different name, may bring the birth of a “Caledonian” atlas created by numerous authors of Melanesian origin. This one saw the involvement of just one.