Note de l'Ifri

Fake medicines trafficking in West Africa

Supply chains and distribution networks

(Nigeria, Benin, Togo, Ghana)

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Sub-Saharan Africa Program

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Introduction

On December 13, 2013, in response to an Interpol initiative[1], the first ever African Conference on pharmaceutical crime was held in Addis Ababa, Ethiopia. Its final communiqué declared the intention of 20 countries to reinforce the struggle against the production of counterfeit drugs[2]. This mobilization of effort at the level of the whole continent is important: the scourge of counterfeit or fake drugs, which according to the World Health Organization represent no less than 10% of the medicines circulating in the world[3], affects Africa in particular. According to a recent study, bringing together results from 21 sub-Saharan countries, more than a third of the medicines collected and analysed did not pass the chemical tests relating to quality or match what was written on the packaging[4]. Anti-malarial drugs are the most affected. It is estimated that up to a million deaths a year world-wide are due directly or indirectly to people taking counterfeit medication[5].

The fight against fake medicines (see definition in boxed text 1) appears to be essential for improving and protecting public health in African countries and so as to preserve progresses made in the fight against major pandemics (see Appendix 1). This task is made difficult by the international dimension of this illegal trading. Trafficking in counterfeit medicines is a world-wide business. The World Customs Organization (WCO) compiled a register of 106 producer countries and 146 destination countries[6]. The production of fake ingredients, the creation of the "medicines" and their packaging, their exporting and transportation take place in a number of countries and involve a production and distribution chain of a kind that is as hidden as it is difficult to investigate.

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[1] For a list, by no means exhaustive, of the organizations involved in the struggle against fake medicines, see Appendix 3.

[2] Interpol, *La déclaration d'Addis-Abeba à l'appui de la lutte contre les faux médicaments dans toute l'Afrique,* Press Release, December 16, 2013, available on: www.interpol.int/fr/Centre-des-m%C3%A9dias/Nouvelles-et-communiqu%C3%A9s-de-presse/2013/N20131216.

[3] This proportion could be scaled up, since seizures are constantly on the increase. Those carried out by the World Customs Organizations (WCO) increased by 300% between 2007 and 2009, stemming in part from very large seizures made during this period. See E. Przyswa, "Contrefaçons de médicaments et organisations criminelles*"*, *Rapport d'étude, IRACM,* September 2013.

[4] G. M. L. Nayyar, J.G. Breman, P.N. Newton, J. Herrington, "Poor-quality anti-malarial drugs in South-East Asia and sub-Saharan Africa", *The Lancet Infectious Diseases*, Vol. 12, June 2012, pp. 488-496.

[5] See R. Bate, R. Nugent, "The Deadly World of Fake Drugs", *Foreign Policy*, No. 168, September-October, pp. 57-65.

[6] Figures cited by C. Zimmerman in a radio programme "Le débat africain", A. Foka, *RFI*, February 6, 2012.

Our analysis concentrates on four countries which are "consumers" of counterfeit medicines in West Africa: Nigeria, Benin, Togo and Ghana. Their coastal situation means that they are in a "privileged" position to serve as entry and distribution points. By way of an example on August 21, 2013, close on two tons of fake medicines were confiscated in the Fifadji quarter of Cotonou in Benin[7]. Two months earlier in Lagos, Nigeria, 150,000 counterfeit doses of Postinor 2, an emergency contraceptive, were discovered at the airport[8]. In the same country, mass-scale destruction of seized counterfeit medicines is ongoing (for example, three thousand million nairas' worth [approx. 14 million euros] in the State of Kano in the North-West in 2012[9]). In Ghana, a study carried out in 2008 showed that 80% of the examples of anti-malarial tablets purchased in the pharmacies of Kumasi, the country's second city, were sub-standard[10]. The differences between what goes on in the four countries used for our study make a comparative approach particularly interesting, especially with regard to health care systems, medicine supply networks and the degree of resolve behind national efforts to combat counterfeiting.

When studying these four West-African countries, we have tried to trace back step by step through the stages of these industries and to understand how the production and distribution networks are organized. What techniques are used to avoid government controls and seizures at borders at one end, right down to local markets at the other? How do they manage in numerous cases to infiltrate official distribution networks so as to get their products on to the market – both official markets and unofficial ones?

In its first three sections, our article will cover conditions pertaining to the production, export and transit routes for counterfeit medicines, how they enter Africa and how they are distributed *via* official and unofficial markets. The final section will consider the question as to the type of criminality involved: is it correct to speak of mafia networks when it comes to the trafficking in counterfeit medicines in Africa? In our conclusion, we shall provide a short account of efforts undertaken to fight against this scourge on both the national and the regional scale.

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[7] IRACM (Institute of Research against Counterfeit Medicines) News, *Bénin: saisie de faux médicaments sur un marché à Cotonou*, published on September 3, 2013, consulted October 28, 2013, accessible at: www.iracm.com/2013/09/benin-saisie-de-faux-medicaments-sur-un-marche-a-Cotonou/.

[8] IRACM News, *150 000 doses de Postinor 2 falsifiées découvertes au Nigeria*, published on September 10, 2013, consulted October 28, 2013, accessible at: http://www.iracm.com/2013/09/150-000-doses-de-postinor-2-falsifiees-decouvertes-au-nigeria.

[9] IRACM News, *Nigeria: saisie massive et destruction de faux médicaments*, published on October 2, 2013, consulted on October 28, 2013, accessible at: http://www.iracm.com/2013/10/nigeria-saisie-massive-et-destruction-de-faux-medicaments/.

[10] UNICRI, 2012.

Boxed text 1: Defining counterfeit medicines

The term "fake medicine", although it serves as an eye-catching term and is widely used in the media, is neither precise nor recognized internationally. In fact, the only legal definition is that proposed by the WTO (World Trade Organization) in 1992 regarding counterfeit medicines:

"[Counterfeit] medicines are medicines that are deliberately and fraudulently mislabelled with respect to identity and/or source. Use of [counterfeit] medicines can result in treatment failure or even death.[11]*"*

This definition does not include, however, *defective* medicines, that is to say medicines of poor quality resulting from an involuntary error in the process of manufacture, packaging, storage or transportation. Counterfeit medicines are in fact another sub-category of "sub-standard medicines", which are of inferior quality. Drops in quality with regard to "real" medicines are *intentional* and can apply to either contents or containers (see Appendix 1). These false medicines can be copies of original brands (violation of intellectual property legislation) or generic medicines or simply create non-registered medicines altogether. The manufacture or distribution of such medicines is, in theory, illegal in any country.

A definition which minimises the range and seriousness of the phenomenon

Legally speaking, the term counterfeiting[12] relates clearly and uniquely to the right of intellectual property, governed at international level since 1995 by the agreement on Trade-Related Aspects of Intellectual

[11] "Spurious/falsely-labelled/falsified/counterfeit (SFFC) medicines" – *Aide-mémoire de l'Organisation Mondiale de la Santé*, No. 275, May 2012. At the level of West Africa, the West African Economic and Monetary Union (WAEMU) adopts the WHO definition virtually word for word. See: www.uemoa.int/Documents/Actes/Annexe_Dec_08_2010_CM_UEMOA.pdf.
In addition to this definition, reference can be made to that of the Medicrime Convention of the Council of Europe (adopted in 2011, signed by 23 countries but not yet in force) which qualifies counterfeiting as "*a false representation as regards identity and/or source*" of medicines, or to the wider definition used by the IMPACT group of the WHO, but which has no legal force. See: www.iracm.com/falsification/definition/

[12] The French Customs gives the following definition of counterfeiting: "It constitutes a violation of a right to intellectual property. What are particularly regarded as counterfeiting are: the reproduction, use, appending or imitation of a brand identical or similar to one designated in the registering of a product without the authorization of its owner or the beneficiary of the exclusive right to exploit it; any copying, importing or sale of a new invention without the consent of the patent-holder; any reproduction, complete or partial of a design or model without the authorization of its author […]." See: www.douane.gouv.fr

Property Rights (TRIPS)[13]. This terminological restriction gives rise to heated polemics when people see the dramatic consequences of such products for human health (Appendix I). Some argue that the manufacture of such drugs and their distribution should be made a crime against humanity (Nayyar *et al*., 2012), regarding the deaths which result from false medicines as relating to the "perfect crime"[14]. Moreover, the term counterfeiting seems to exclude the phenomenon of generic medicines, which are not protected by intellectual property rights[15]: the fake production of such drugs by traffickers is however just as dangerous for patients as bad copies of patent medicines.

More recently, the WHO has been sheltering behind the deliberately vague expression "Spurious/falsely-labelled/falsified/counterfeit (SFFC) medicines"[16].

It should be noted that there also exists (although this is outside the framework of our study) over and above trafficking in counterfeit medicines, a black market in false ingredients, enabling people to produce medicines.

In this article we shall not be differentiating between the expressions "counterfeit medicines", "false medicines" or "fake medicines": terms which together cover all medicines which deceive the purchaser or the consumer regarding their contents, their origins or the distribution routes they have followed.

[13] TRIPS agreements are relayed and specified at the regional level by the Bangui Accord (March 1977) drawn up by the African Intellectual Property Organization (OAPI in French), to which two of the States involved in our study belong, namely Benin and Nigeria. In order to consult the list of States which are affiliated to the OAPI, see: www.oapi.int/index.php/fr/oapi/États-membres. At the same time, the community laws of WAEMU prohibit all forms of counterfeiting, even though these are not always reintroduced into the national legislative codes.

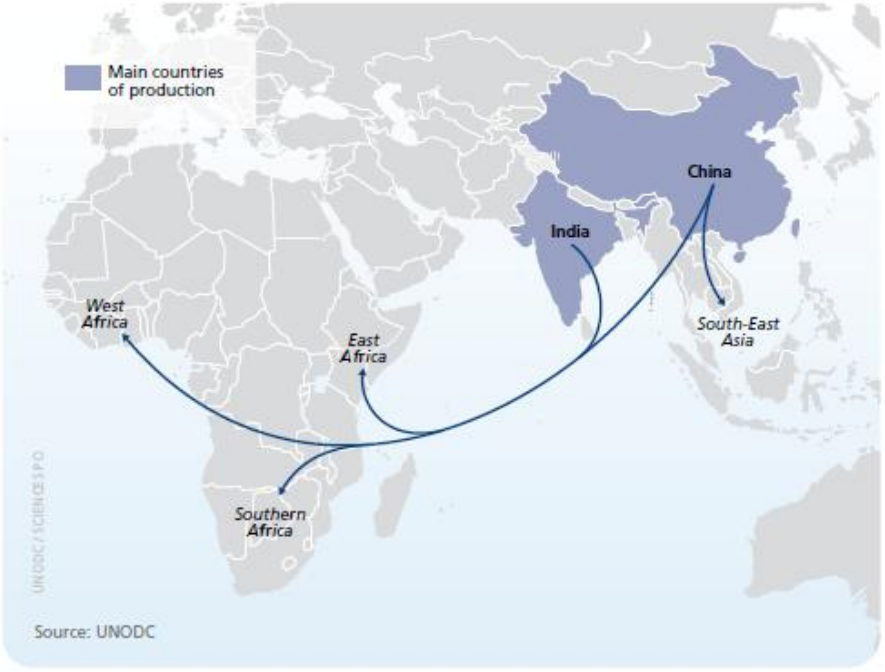
[14] The death of the patient is thus put down to his disease or to a wrong diagnosis reached by the patient's doctor, without doubt being cast on the quality of the medicine. See, for example, M. Nelson, M. Vizurraga, D. Chang, "Counterfeit Pharmaceuticals: a Worldwide Problem", *The Trademark Reporter*, Official Journal of the International Trademark Association, Vol. 96, No. 5, September-October 2006, p. 1068.

[15] Sometimes medicines, for which the patent has expired, retain their brand or are copied and sold by other laboratories under other brand names, without the said brand names having any value in terms of intellectual property. See: www.wto.org/french/tratop_f/trips_f/factsheet_pharm03_f.htm.

[16] WHO, 2012.

Production and dispatch: a shared role

The distribution route for counterfeit medicines from Asia to Africa[17]



China and India: the main suppliers

Although new countries such as Brazil[18], Argentina[19], Indonesia, Russia, Ukraine, Egypt or the Philippines have recently been involved in major seizures of counterfeit medicines, by far the largest share in their production takes place in Asia[20] and, in particular, in India and

[17] "Chapter 8. Counterfeit Products", in *The Globalization of Crime. A transnational organized crime threat assessment*, United Nations Office on Drugs and Crime (UNODC), 2010.
[18] Brazil seems to be the only country in Latin America to have introduced tough measures to punish this trade (penalties can be as much as 15 years in prison as against six months in most other countries) (Nelson *et al.*, 2006).
[19] Latin American products tend for the moment to be destined for the United States and Europe rather than for Africa (Interview with an expert from IRACM, December 2013).
[20] Bate suggests that 50% of counterfeit medicines originate from Asia (2008), while according to Przyswa no less than 70% of counterfeit medicines come from India or China (2013).

China[21]. These two countries have developed major pharmaceutical industries just at the time when generic medicines were recognized as legal during the 1970s. Today, India has 20,000 entrepreneurs producing medicines: most of the companies are small and specialized in generic medicines; the country also has around 800,000 distributors[22]. Faced by such a large sector, attempts at regulation or control cannot prove effective when up against the underground industry. Among the factors which favour the production of counterfeit medicines mention can be made, in particular, of the excessive leniency[23] or toleration on the part of the authorities regularly accused of corruption, and of a series of dysfunctional State practices. Indeed, the weak nature of the penalties incurred and a judicial system that is far from effective in these matters, the lack of a legislative framework protecting intellectual property, as well as the lack of staff or adequate infrastructures for detecting trafficking, all contribute to the blossoming of the unofficial pharmaceuticals sector[24].

Producers are of all sorts of types, from rural workshops with rudimentary conditions to industrial units producing real medicines in the day-time and used at night by unscrupulous employees[25]. Moreover, this explains the wide variety of techniques used by the counterfeiters, ranging from the crude assembly of simple raw materials (chalk, starch, sugar…) to the quasi exact copying of branded medicines but with lower doses, obtained using the "*reverse engineering"* technique[26]. Counterfeit medicines are sometimes placed in genuine packaging spirited away from the official network or

[21] We have seen the following regions cited: for India the towns of Agra, Kanpur and Meerut (in Uttar Pradesh, in the North of the country) and the region of Haryana (bordering on Uttar Pradesh); for China the provinces of Guangdong, Fujian and Zhejiang (South-East coast), Jiangsu and the Yangtze delta (North of Shanghai), Yunnan (in the South-West on the frontier with Myanmar) and Henan (in the East of the country, inland). This list is not an exhaustive one.

[22] G. Swaminath, "Faking it – the Menace of Counterfeit Drugs", *Indian Journal of Psychiatry*, October-December 2008, No. 50(4), pp. 238-240, accessible on: www.ncbi.nlm.nih.gov/pmc/articles/PMC2755136/.

[23] Lax attitudes can be reassessed now in view of recent repressive measures launched in July 2013 by China against the sale of counterfeit medicines and of the execution of the chairman and managing director of the pharmaceutical authority in Peking for corruption (Bates, 2008). See, for example: M. Rajagopalan, M. Martina, "UPDATE 2-China launches crackdown on pharmaceutical sector", *Reuters*, July 17, 2013, consulted in August 22, 2013, accessible on: www.reuters.com/article/2013/07/17/china-multinationals-crackdown-idUSL4NOFN18W20130717.

[24] For more details on the sector producing counterfeit drugs in India and China, see: "Chapter 8. Counterfeit Products", *op.cit*, UNODC, 2010.

[25] Some of these companies are well-known but often benefit from the complicity of officials from the health sector. See, for example, factories in the North of India: R. Kumar Singh, "Blacklisted pharmaceutical companies still selling drugs", *Hindustan Times,* May 21, 2010, accessible on: www.hindustantimes.com/India-news/Lucknow/Blacklisted-pharmaceutical-companies-still-selling-drugs/Article1-546660.aspx

[26] "Reverse engineering" involves studying an object or product in order to determine its internal functioning or its method of manufacture. See, C. Baxerres, E. Simon, "Regards croisés sur l'augmentation et la diversification de l'offre médicamenteuse dans les Suds", *Autrepart*, Presses de Sciences Po, No. 63, 2013/1, pp. 3-29.

in imitation packaging that is sometimes extremely accurate[27]. In any case, it is very simple and relatively inexpensive to produce counterfeit medicines in very large quantities and using minimal staff and materials[28].

Exporting fake medicines: internationalization of the activity

A large proportion of counterfeit medicines is destined for the national market. Yet certain producers prefer to turn towards the international market, attracted by the prospect of enormous potential profits. The volume of the world market in counterfeit medicines is estimated by most sources at between 45 and 75 thousand million dollars a year[29]. Certain people even put the figure at 200 thousand million euros[30], more than the GDP of Peru or Hungary. Investing in counterfeit medicines can be between 10 and 25 times more profitable than trafficking in heroin, cocaine or cigarettes[31]. The market is booming (it grew by 90% between 2005 and 2010[32]).

Producers rarely export their wares themselves. This task is entrusted to intermediaries, who in their turn use freight companies. The latter are usually local, but it is also possible to find numerous companies set up by Africans living on the spot. The port city of Guangzhou is one of the Chinese towns with the largest immigrant populations, in particular from Congo[33] and Nigeria[34]. The latter were accused by the other minorities or the Chinese of being particularly closely involved in trafficking of all kinds. Hong Kong and Taiwan were also cited as two major centres which control and finance

[27] On counterfeiting techniques, see, for example: G. Swaminath, "Faking it – The Menace of Counterfeit Drugs", *op. cit.*
[28] Conversation with Bernard Leroy, Director of the International Institute of Research against Counterfeit Medicines, December 5, 2013.
[29] R. Bate, R. Nugent, "The Deadly World of Fake Drugs", *op. cit.* or E.Przyswa, "Counterfeit Medicines and Criminal Organizations", *Rapport d'étude,* IRACM, September 2013.
[30] World Economic Forum, cited by Przyswa, 2013.
[31] For every 1,000 dollars invested, the net gains would be as much as $500,000 from trafficking counterfeit medicines as against $20,000 from trafficking heroin, $43,000 from trafficking cigarettes (Przyswa, 2013, referring to a study carried out by the International Federation of the Pharmaceuticals Industry in 2009) and approximately $30,000 from trafficking cocaine (according to figures provided in the newspaper *Monde diplomatique*, A. Frintz, *Trafic de cocaine, une pièce négligée du puzzle sahélien,* February 2013, see: www.monde-diplomatique.fr/2013/02/FRINTZ/48744.
We should note that these figures are estimated ones and, as far as we know, they have not yet been calculated using any other methods enabling comparison of accuracy.
[32] Przyswa, 2013, or the United Nations Inter-regional Crime and Justice Research Institute (UNICRI), Turin, 2012.
[33] B. Faucon, C. Murphy, J. Whalen, "Africa's Malaria Battle: Fake Drug Pipeline Undercuts Progress", *Online Wall Street Journal,* May 19, 2013, accessible on: http://online.wsj.com/art/article/SB10001424127887324474004578444942841728204.html.
[34] O. Marsaud, "Les Africains de Guangzhou", *RFI*, September 24, 2009, consulted on December 3, 2013 on: http://www.rfi.fr/actufr/articles/117/article_84983.asp.

trafficking from a distance, right through from the production of counterfeit medicines to their export.

Once the counterfeit medicines have been sent off on their journey, the route they follow is a long one (it can sometimes take several months), before the final destination is reached. The number of transit points involved, already large for regular sea routes, is made even larger by the traffickers, who prefer to use free zones (such as Jebel Ali in Dubai). Tracing these products thus becomes quite simply impossible. Various procedures are used by the traffickers to ensure it.

First of all, the transhipments (transfer of containers to a new means of transport) currently require the drawing up of new documents, indicating only the place of origin and destination, as well as the name of the forwarding agent, making the primary origin of the product "disappear" and likewise any possibilities for tracing the producer[35].

Secondly, the medicines are often re-packaged[36], sometimes several times so as to respect, wherever possible, the local language and legal requirements. During this process, unscrupulous intermediaries do not hesitate to remove batch numbers, to modify essential information on the packaging and to hide the provenance of the medicines, sometimes with the simple commercial aim of making the names of potential rivals disappear (the "neutralization" process[37]). Unused packaging can be diverted so as to serve for counterfeit products. It is also possible that unintentional errors occur during these operations and these can have disastrous consequences[38].

The list of countries involved in these "transit" operations at the time of seizures is a long one. With regard to the route towards Africa, the countries of the Middle East are cited most frequently and, in particular, the Arab Emirates *via* Dubai[39], Jordan, Turkey, Iraq, Syria before the crisis, Lebanon, Egypt and the Palestinian territories. It is, however, difficult to really speak about "trafficking routes", given that these trajectories are numerous, constantly shifting and evolving,

[35] Conversation with an expert from the IRACM in December 2013.
[36] There are theoretically very strict checks in operation to ensure re-packaging does not take place, because it can only be carried out by importers armed with a special licence or, in certain cases, by third parties under oath.
[37] "Throughout the whole transport process, the involved distribution brokers and companies will often conceal the names of the previous suppliers on the shipping documents to prevent customers from by-passing them on future purchases. This so-called "neutralization78" is applied by many intermediaries in order to protect their commercial interests and exclude as many competitors as possible from the distribution chain and the business. This practice also conceals the origin of the medicine, as any trace that refers back to its provenance disappears, making it literally impossible to track the drug or the medical substance" UNICRI, 2012, p. 42.
[38] As regards the example of "Directions for Use" being inserted into the wrong boxes of counterfeit medicines and leading to errors as regards the way substances are administered, see: *Émission Priorité Santé,* "Faux médicaments", Wednesday, April 17, 2013, Report by Igos Strauss interviewed by C. Hédon, accessible on: www.rfi.fr/emission/20130417-1-faux-medicaments.
[39] According to Przyswa, half the world's counterfeit medicines pass through Dubai (2013).

often in response to major confiscation operations organized by customs authorities. Over the last three years, Christophe Zimmerman, responsible for the fight against piracy and counterfeiting on behalf of the World Customs Organization (WCO), has noted constant adaptation of routes, companies, merchandise declarations as well as evolution in the strategies for avoiding inspections (merchandise being "deposited" in boats of a smaller size and thus less likely to be inspected, large numbers of forged authenticity certificates or authorizations to market drugs)[40].

By ensuring that their products pass through third countries, the counterfeiters hope to deflect the attention of customs authorities, who are less suspicious if products do not come directly from Asia (the "spreading-the-load" technique). Given that they have to keep passing these cargoes from one person or company to another, the importers and middle-men lose track of producers and many do not have any direct contact with the latter. The United Nations Inter-regional Crime and Justice Research Institute (UNICRI) estimates that a medicine, passing through this "parallel" market, may have been the object of between 20 and 30 intermediate transactions before reaching its final destination[41].

It should nevertheless be noted that a significant number of containers are transported directly from Asia to African ports without transit stages, forming part of the countless commercial exchanges which take place every day between these two continents – both licit and illicit[42]. The number of containers arriving in Africa from Asia each day is extremely large: indeed Asia dominates international maritime transport. According to rankings calculated by the United Nations Conference on Trade and Development (UNCTAD), fourteen of the world's 20 major port terminals are situated in Asia and nine of them in China. Chinese ports alone constitute almost 52% of the total capacity for through-put of containers[43].

[40] Quoted in Émission Priorité Santé, 2013
[41] UNICRI, 2012, *op. cit*.
[42] Conversation with a specialist from the IRACM, December 2013.
[43] Figures for 2009 expressed in TEU (Twenty-foot Equivalent Units). United Nations Conference on Trade and development (UNCTAD), *Review of Maritime Transport*, Geneva, 2012.

Trafficking in African countries

The African pharmaceuticals market is expanding rapidly, even though it only accounts for 2% of the world market in this sector[44]. Boosted by population growth and the emergence of middle classes, it should be worth 5,000 million dollars by 2018, as opposed to the 2,200 million dollars it was worth in 2011[45]. The total value of pharmaceutical imports in West Africa was 1,500 million dollars in 2010. Given the current shortcomings in governance and in the surveillance of international imports, the opportunities for those trafficking counterfeit medicines are enormous with slight risks run.

The large ports: Access to the African coasts

Lagos, Cotonou, Lomé, Accra-Tema[46], and Conakry are favoured points of entry for counterfeit medicines coming into West Africa. The port of Lomé in Togo is the only deep-water port in this sub-region. It is therefore a particularly important hub for unloading Asian containers brought in by cargo-ships and distributed over land to other countries, particularly landlocked ones: Mali, Burkina Faso and Niger[47]. Customs officials in large international airports in this part of the world occasionally seize these products, but seldom on the industrial scale typical of the port seizures.

Moving through customs is a critical moment in the distribution chain of these illegal products. The traffickers go to ever more ingenious lengths in their efforts to outwit the vigilance of customs officials and they resort to a range of methods like hiding medicines among legal products or falsifying official documents referred to above, particularly those granting authorization to sell medicines. Moreover corruption is often cited as a phenomenon helping counterfeit medicines make their way to local markets. While corruption has many officials at the bottom of the ladder in its grip, it

[44] Including the Middle East. See: "L'Afrique premier marché export de l'industrie pharmaceutique chinoise", Agence Ecofin, November 5, 2012, accessible on: www.agenceecofin.com/commerce/0511-7415-1-afrique-premier-marche-export-de-l-industrie-pharmaceutique-chinoise.
[45] "Le marché subsaharien du médicament doublera d'ici 2018 à 5 milliards $", Agence Ecofin, January 18, 2013, accessible on: www.agenceecofin.com/economie/1801-8492-le-marche-subsaharien-du-medicament-doublera-d-ici-2018-a-5-milliards.
[46] It is worth noting that since the end of the first decade of the 21st century these ports have all handed over the exploitation of their container terminal to the Bolloré Africa Logistics company. Source: www.bollore-africa-logistics.com.
[47] Émission Priorité Santé, 2013.

is also omnipresent in circles at the very top of the power structure[48]. The inadequate training and limited funds for customs and legal officials[49] also serve to facilitate the mass-scale entry of counterfeit medicines into these countries. Tens of thousands of containers arrive in the large ports of West Africa every day – coming in from Asia and elsewhere – and it is not humanly possible to control the whole flood of this merchandise[50]. In addition, opening containers in transit involves a difficult procedure, authorizations and favourable climatic conditions (so that merchandise does not deteriorate, which means that virtually no containers are ever opened during the rainy season[51]).

Despite the numerous difficulties, customs authorities do from time to time achieve spectacular seizures. At the beginning of April 2012, for instance, Operation Biyela, undertaken by the World Customs Organization with support from the Institute of Research against Counterfeit Medicines, ended in the seizure of 550 million doses of counterfeit medicines in 23 African countries with an estimated value of 275 million dollars. The operation in Togo was particularly fruitful[52]. Another example of a successful seizure was in May 2009, when counterfeit anti-malarial drugs were seized by the Nigerian National Agency for Food and Drug Administration and Control (NAFDAC) in the port of Lagos valued at 32 million nairas ($200,000): the tablets and packaging had been shipped separately and declared as seal tape. The tablets had been made in China and dispatched from the port of Tianjin Xingang by a Chinese export company. The packaging appeared, however, to be of Indian origin[53].

Regional Transit Routes: exploiting differences between systems

For certain products recently unloaded in Africa, the journey then continues within the sub-region. The circulation of counterfeit medicines between the four countries of our study is a known fact. As noted by an expert from the IRACM, whom we interviewed, it

[48] Although it is difficult to prove the corruption at the top of the hierarchy, several of the experts interviewed have confirmed that is the case with regard to trafficking counterfeit medicines, particularly in Benin.
[49] For example, in 2012, only three African countries had at their disposal a laboratory for analysing anti-malarial medicines: Kenya, South Africa and Tanzania (Nayyar *et al.*, 2012).
[50] According to our sources, nowadays the largest cargo ships can transport up to 15,000 containers at a time.
[51] Émission Priorité Santé, op. cit.
[52] IRACM/WCO press release, *Saisie record de médicaments illicites en Afrique,* June 13, 2013 accessible on: http://www.iracm.com/wp-content/uploads/2013/06/Communique-de-presse-BIYELA.pdf
[53] S. Ogundipe, “Nigeria: Nafdac Seizes N32 Million Fake Anti-Malarial Drugs”, *All Africa*, June 2, 2009, consulted on August 28, 2013, accessible on: http://allafrica.com/stories/200906020015.html.

encounters few obstacles, regardless of the quantities of merchandise being transported[54]:

> *"We have zero data. Yet [these drugs] are circulating in every direction, by every means possible. We are a long way from our vision of a properly controlled frontier with specific crossing points and therefore opportunities for inspection. In these countries frontiers are completely porous: they are crossed by cars, bicycles, boats and planes… The question of quantity is not important. People can always find a way".*

In the markets of Cotonou, a whole category of generic drugs is known as "medicines of Nigeria and Ghana": they are among the cheapest on the market and they are in general not authorized for sale in the official pharmacies of Benin[55]. To fetch their supplies the retailers go directly to the markets in the nearby capitals, to wholesalers selling authorized drugs in their country. Their crossing of the frontier is unofficial and based on a system of receipts (payments at a fixed rate per lorry and not on the basis of the merchandise being transported). According to Baxerres[56]:

> *"This system, a particularly effective one, involves for the seller (a Béninois) who usually travels on his own, a day to make his way by public transport to Nigeria to hand over the merchandise he has brought to a warehouse-owner in Lagos. The latter takes care of the formalities (storage, transport, customs clearance) and dispatches the merchandise by lorry, in return for a fee, to Cotonou".*

This unofficial importing of generic drugs, regardless of whether they are of good or bad quality, from Ghana and Nigeria, is based on the differences between the official systems for importing and distributing medicines, which we shall describe in detail in the next section. The systems in English-speaking countries are more liberal, giving rise to competition between the importers/distributors, who turn for the most part[57] to Asian producers so as to reduce their purchasing costs and resale prices and thus remain competitive. The prices of medicines in Benin and Togo are fixed by their governments. Thus a price difference exists on both sides of the frontier creating opportunities which encourage regional trafficking.

Multiple transits are also used to avoid customs inspections (a container in transit cannot be inspected and this ban is exploited by the counterfeiters who cross regional frontiers many times over, even if it means coming back later to the port from which they started out).

[54] Conversation held in December 2013.
[55] C. Baxerres, "L'introduction différenciée des génériques entre pays francophones et anglophones d'Afrique de l'ouest: une illustration de la globalisation du médicament à partir du cas de Bénin", *Autrepart*, Presses de Sciences Po, No. 63, 2013/1, pp. 51-68.
[56] C. Baxerres, *op. cit.,* 2013, p. 56.
[57] For example, 70% of Ghana's (official) imports of medicines come from India (C. Baxerres, *op. cit.,* p.63).

Embryonic production in Africa itself

Apart from South Africa, the pharmaceutical industry is almost non-existent in the continent. Certain Western or Asian multinational corporations have opened branches (in Nigeria, Ghana, Senegal, Tanzania, the DRC, Togo, Uganda, etc.), but local industries are rare and on a modest scale. They are found, in particular, in Nigeria[58], Ghana[59], Togo, Benin and Mali. This small-scale production outfits geared towards the internal market, are insecure and pay little attention to the good practice guidelines laid down by the WHO[60]. Logically enough, the production of counterfeit medicines is also only at an embryonic and artisanal stage, far from the level of sophistication characterizing Asian copies[61]. Nigerian products have a particularly bad reputation in the region, on account of their poor quality. Major efforts are currently being made, with the support of the African Union and the New Partnership for Africa's Development (NEPAD), to develop the pharmaceutical industry in these countries, in particular to produce anti-retroviral, anti-malarial and anti-Tuberculosis drugs[62]. This local production would be welcome for combating the enormous and non-regulated imports of counterfeit medicines from Asia: it is precisely medicines in these three categories which number among the most widely counterfeited in the African continent.

[58] Baxerres suggests a figure of 80 outfits producing pharmaceuticals in Nigeria (2013).
[59] Baxerres suggests a figure of about 20 outfits producing pharmaceuticals in Ghana (2013).
[60] Conversation with Christophe Rochigneux, pharmacist and technical advisor for the WHO, posted to Burkina Faso and then Benin, December 9, 2013.
[61] C. Baxerres, E. Simon, "Regards croisés sur l'augmentation et la diversification de l'offre médicamenteuse dans les Suds", *op. cit.,* 2013.
[62] Within the framework of financial backing from the Global Fund to Fight AIDS, Tuberculosis and Malaria, in particular.

Selling: unofficial markets… but officials as well

Unofficial markets: responding to demand from local populations

Unofficial markets in large West-African towns are the most common place for selling sub-standard medicines. It is above all the poor and most unprotected fringes of the population which go there to stock up on medicines: they are attracted by the much lower prices in comparison with the products sold in official pharmacies[63]. In most cases, neither the customers nor even the sellers know the true nature of the products duly exchanged. Yet researchers have been able to observe that consumers, although informed and warned about the quality problems of the medicines they are buying, persist in purchasing their supplies from unofficial retailers, attaching more importance to price and accessibility than to the alleged capacity of the medicines[64]. Small local retailers, who have no licences and are often unaware of the quality of their merchandise, are the last link in the chain of illegal distribution of fake medicines.

It should be noted that, although the unofficial markets in urban areas are those where sales of counterfeit medicines are at their most rife, rural areas are not spared. Their vulnerability is even greater, because good-quality medicines are harder to access there (far away from health care centres) and when these populations are extremely poor, price looms as an even more crippling factor. This situation testifies to the conspicuous flexibility and adaptation of the illegal distribution networks capable of penetrating as far as the most remote of markets far away from the entry ports on the coast where the merchandise was originally brought in. At the same time, once the counterfeit medicines have been successfully absorbed into official distribution channels, in particular government ones, they will be present in rural areas to the same extent as in legal urban networks. Nevertheless, counterfeit medicines circulate in the rural areas on a more modest scale[65] in view of the reduced population density and

[63] By way of example: a study carried out in Kenya revealed that counterfeit medicines were sold for a quarter of the price of the real products copied by the counterfeiters (UNICRI, 2013).
[64] See: Émission Priorité Santé, op. cit. 2013.
[65] Conversation with Christophe Rochigneux, pharmacist and technical advisor for the WHO, posted to Burkina Faso and then to Benin; December 9, 2013.

purchasing power which render trading in rural markets less appealing.

Penetration of official retail outlets

Legal systems

Before turning to infiltration of official markets by counterfeiters, we shall describe briefly how the system for legally importing medicines functions in the West-African countries considered in this study.

In the Benin and Togo systems, there are two parallel networks functioning, which complement each other[66]: the State network and the private one. The State sector is supported first and foremost by a single National Purchasing Centre (NPC), which works essentially with generic medicines. In most cases, given the limited nature of local production, these purchasing centres obtain their stocks of essential medicines by importing them. The choice of suppliers is therefore crucial for ensuring that the imported medicines are of good quality. The African Association of Essential Drugs National Purchasing Centres (ACAME in French) has created a model file for suppliers' preliminary qualifications[67] used by most of the member NPCs as a guide when choosing suppliers. In (relatively frequent) cases when the NPCs do not deal directly with the producer of generic medicines, but with an intermediary, procedures are in place to check out their reliability[68]. The National Purchasing Centres also work with one or two forwarding agents, who are authorized and have a solid reputation for dispatching medicines properly. After deliveries have been received and stored in a central warehouse, the products are then dispatched to the various health districts and then to health care providers[69] before finally reaching local hospitals, dispensaries and so on.

At the same time, private wholesalers and distributors import medicines and supply private health care facilities (such as clinics and private pharmacies) mainly with branded medicines and thereby adding to the range of medicines on offer in the country. These

[66] According to what we were told in a conversation with Christophe Rochigneux, pharmacist and technical advisor for the WHO, posted to Burkina Faso and then to Benin; December 9, 2013.

[67] This file of preliminary qualifications consists of a technical section (inspection certificates, analysis findings…) and an administrative section (information on the production site, on the national authorities responsible for regulation…). It is currently being updated for 2014 so as better to reflect the Model Quality Assurance System of the WHO. This information was gathered during a conversation with the Permanent Secretary of the ACAME: December 13, 2013.

[68] These actors, usually from the Northern hemisphere, have to provide a range of information on their own sources of supply and demonstrate their official status with the authorities in their own country. This information was gathered during a conversation with the Permanent Secretary of the ACAME: December 13, 2013.

[69] A health district is a geographical operational unit within the national health-care system. It can cover one or more adjacent administrative zones (urban districts, regions etc.). The health-care providers are the operational structures actually providing health-care: pharmacies, hospitals, health centres etc.)

players are few in number (in Benin there are only four of them[70]) and their activities are strictly controlled: in particular, they are obliged to hold a wide assortment of authorized medicines.

Certain large structures within the health care system, like the University Health Centres (UHC), use a combination of the two systems in order to ensure their supplies of medicines. The National Purchasing Centres supply them with essential generic medicines, while they turn to international suppliers or private local ones for numerous pharmaceutical goods, but also for "up-market" medicines (such as anti-cancer drugs…) and all branded medicines or such that do not figure on the list of essential medicines for the country concerned.

In a regime very different from that system, free regulation of the market applies to the pharmaceutical sector in English-speaking countries. Government agencies (NAFDAC in Nigeria and the Food and Drugs Authority in Ghana) establish lists of important authorized products and make recommendations regarding imports, and control, where possible, the medicines which are being brought into the country. Yet it is the host of private wholesalers and distributors[71] which maintain the importing and distribution of medicines throughout the country. Each wholesaler distributes products from just one or two companies and also takes upon itself the promotion of the said brands. Local companies are sometimes managed by diasporas, in particular the Indian or Chinese ones, which facilitates direct contacts with the centres where the goods are produced.

Infiltration of false medicines at all levels

The manufacture and distribution of branded products are on the overall submitted to closer surveillance than generic medicines, which as a result are more likely to be copied. It is therefore logical for the public sector, the main distributor of generic medicines, to find itself affected by the penetration of official networks by counterfeit medicines. This infiltration can materialize at various junctions in the distribution chain. First of all, it can come about that suppliers are not selected in accordance with sufficiently rigorous criteria or that suppliers succeed in hiding the dubious quality of their products. The NPC which has been taken advantage of then starts ordering counterfeit generic medicines directly. After that, the numerous transit stages during the transportation of the medicines on their way to Africa greatly facilitate the penetration of the official network by sub-standard products, involving the numerous processes referred to above (transfers which make the original sources disappear, re-packaging, mixing of real and counterfeit drugs etc.). Eventually, the local distribution chain also suffers from the porous nature of the border-line between legal and illegal networks. At each stage in distribution (storage, dispatching medicines to the various parts of the country, distribution among the health-care providers), unscrupulous operators can hijack quality products and replace them with

[70] C. Baxerres, *op. cit*., 2013.
[71] Approximately 300 in Ghana and 500 in Nigeria (C. Baxerres, *op. cit.,* 2013).

counterfeit ones in order, among other things, to sell the genuine medicines for their own personal profit[72].

Naturally enough, private distribution is not spared this infiltration by counterfeit products either. Local intermediaries and wholesalers may be implicated in trafficking as such. We could cite the case of Kingsley Okafor, established in Accra, Ghana, who was arrested by the Food and Drugs Authority in June 2103: this Nigerian had been importing counterfeit medicines from his country of origin, storing them in his own residence and supplying them on demand to the pharmacies of Accra's business Centre[73]. Cases are also encountered when corrupt pharmacists deliberately introduce counterfeit medicines into their private pharmacies[74].

It is often impossible for a non-specialist to recognize counterfeit products with the naked eye. It is very easy, when control procedures are far from effective or respected, to introduce such medicines into the official distribution network, to mix them up with genuine good-quality products, without any visible difference being conspicuous. The growing number of players all along the chain makes it easy for the identity and actual provenance of the medicines to be forgotten. It is also always difficult to determine the guilt of the intermediaries[75], who sometimes have been involved unwittingly.

[72] Conversation with the Permanent Secretary of ACAME, December 13, 2013.
[73] "Nigerian grabbed for peddling fake drugs", *Ghana Web*, June 28, 2013, see: www.ghanaweb.com/GhanaHomePage/crime/artikel.php?ID=278116.
[74] Conversation with Christophe Rochigneux, pharmacist and technical advisor for the WHO, posted to Burkina Faso and then to Benin; December 9, 2013.
[75] For example: Aben Iduku Hubert from the DRC, installed in Guangzhou since 1988 and whose freight company has been accused of having transported large quantities of counterfeit medicines, maintains not to have known that counterfeit tablets had been inserted into the speakers he was exporting to Luanda, Angola (a case dating from June 2012). See: B. Faucon, C. Murphy, J. Whalen, "Africa's Malaria Battle: Fake Drug Pipeline Undercuts Progress", *op. cit.*

African traffickers in fake medicines: Mafia Networks?

Trafficking in fake medicines is a trans-national phenomenon and large numbers of players engage in this criminal activity for relatively long periods (on a regular, uninterrupted basis). It would therefore appear to fit the criteria for organized crime[76], if we take the definition, albeit a particularly flexible one, used by the UN Convention on Transnational Organized Crime, signed in Palermo in 2000 and according to which "*an organized criminal group*" is "*a structured group of three or more persons, existing for a period of time and acting in concert with the aim of committing one or more serious crimes or offences established in accordance with this Convention, in order to obtain, directly or indirectly, a financial or other material benefit".* This fear of seeing international organized crime implicated in fake medicines trafficking finds expression, for example, in Resolution 20/6 of the XX Session of the Commission on Crime Prevention and Criminal Justice (2010-2011)[77].

It is, however, difficult to affirm the involvement of actual mafias in this trafficking. Although detailed study of this question is rendered difficult by the highly flexible nature of the networks involved and their constant evolution, what emerges here tends to be random alliances of players, depending upon the circumstances of the day, which control parts of the distribution chain and exploit the "structural gaps"[78] so as to penetrate it as effectively as possible. The implication of real mafias, among which the notorious Chinese triads stand out, remains unproven to this day. Yet trafficking fake medicines is based on the same methods, procedures or routes as certain kinds of drug-trafficking, which would indicate certain parallel features or the involvement of some of the same players.

In the end it is more appropriate to talk of "criminal networks" rather than large-scale organizations: the structures vary, but there appear to be few models with a strict hierarchy controlling the whole chain of production and distribution. Przyswa tends to refer instead to collaboration between "principal networks" and "peripheral networks",

[76] E. Przyswa, "Counterfeit medicines and criminal organizations", *op. cit.*
[77] In this same Resolution it is noted, among other things, that "all stages of the fraudulent-medicine supply chain, in particular distribution and trafficking, require neither sophisticated infrastructure nor a high level of skill, and that as new methods for identifying fraudulent medicines are developed, criminals continually improve their methods of replicating packaging, holograms and other physical aspects, as well as the chemical composition, of their products". See: "Trafficking in Fraudulent Medicine", on the UN Office on Drugs and Crime website, consulted on August 22, 2013.
[78] E. Przyswa, "Counterfeit medicines and criminal organizations", *op. cit.*

which are more or less autonomous or interacting with each other – networks whose members cover a very wide range of "white-collar criminals", which, roughly speaking, bring together Asian industrialists, international negotiators, corrupt customs officials, wholesalers dealing in pharmaceuticals, small-scale distributors, and even financial or legal experts and those in power at a high level. All these players would be attracted by the significant incomes this illicit trade can generate and at the same time seduced by the minor risks they would be running and the ease with which these products can be transported and concealed on account of their small size. Violence does not play the same role as in mafia networks, in which it serves to hold the group together, being both used as a dissuasive and coercive tool[79].

The organizations implicated in the trafficking of fake medicines come in all shapes and sizes. The smallest ones (with less than five members) rely mainly on e-trade and online marketing and they do import these products into the African continent. The largest organizations can bring together hundreds of individuals involved to a greater or lesser degree in the trafficking and they rely on complex transnational legal structures and on numerous "cover" companies and local subsidiaries. Decision-making is to a large extent decentralized, which makes possible a high degree of autonomy for the various cells.

[79] Violence is not, however, totally absent from this trafficking. Dora Akunyili, for instance, who has been the director of Nigeria's NAFDAC since 2001, has had to ride out various physical attacks and threats aimed at disrupting her campaigning against fake medicines in Nigeria, activity which will be described in the Conclusion (UNICRI, 2013).

Conclusion: the fight against fake medicines in Africa

To sum up, trafficking in fake or falsified medicines is undertaken by a whole chain of players, autonomous from each other but inter-related and belonging to international networks. Overseas producers – mainly from Asia – are connected to consumer countries *via* complicated procedures and routes which make it possible to avoid, for the most part, customs and sanitary inspections. The African continent, drawn into this illegal side of globalization, is affected particularly seriously by this scourge which, although it does not seem to represent a direct risk to its security and stability as do other types of trafficking[80], represents a grim threat for the health of populations.

Some States, far from taking the question lightly, have embarked upon a struggle against this trafficking. The most striking, as far as our study is concerned, is that waged by Nigeria. This particular country saw the tide of fake medicines turn into a flood in the 1980s. The military junta in power at the time, issued numerous import licences with few questions asked, when the country was undergoing major economic changes, which were undermining the whole of the State apparatus and encouraging a sharp rise in corruption and the unofficial sector. In the 1990s, some measures had been introduced in an attempt to wipe out this phenomenon[81]: a law prohibiting the importing of medicines (1990, the first of its kind), a decree requiring the registration of medicines imported and distributed within the country (1993) and the creation of the Nigerian National Agency for Food and Drug Administration and Control (NAFDAC) also in 1993. They did not prove successful. At the beginning of the new century, counterfeit or sub-standard medicines accounted for 70% of the country's whole market in pharmaceuticals[82], a horrifying statistic bound to have dramatic consequences for public health, even if the latter have not yet been measured in any detail. The situation was so extreme that some

[80] Even if some authors suggest that it has been possible that revenues from fake medicines trafficking were used to finance certain terrorist groups in various parts of the world, such as Hezbollah or the Irish Republican Army (E. Przyswa, "Counterfeit Medicines and Criminal Organizations", *op. cit.*), there is no solid evidence confirming, for instance, the hypothesis that Al-Quaeda in the Islamic Maghreb (AQMI) has received financial support from this specific illicit sources.
[81] W.O. Erhun, O.O. Babalola. M.O. Erhun, "Drug Regulation and Control in Nigeria: the Challenge of Counterfeit Drugs!", in *Journal of Health & Population in Developing Countries*, No. 4(2), 2001, see: www.nigeriapharm.com/Library/Drug_regulation.pdf.
[82] R. Bate, "The Deadly World of Fake Drugs", *op. cit.*

countries in the sub-region banned the import of Nigerian pharmaceutical products[83]. In 2001, energetic Dora Akunyili was made director of the NAFDAC. Under her leadership, many additional anti-trafficking measures were introduced:

- Confinement of medicines imports to two airports and two ports, where NAFDAC staff would be present;
- A ban on importing certain Indian and Chinese products[84];
- Establishment of direct contacts with the authorities of those countries in order to regulate and inspect the medicines they export to Nigeria;
- Increased frontier controls and seizures;
- Revision of procedures for the issue of certification documents;
- Multiple raids in order to inspect the quality of medicines produced and distributed within Nigerian territory and to seize counterfeit products;
- Efforts to encourage the development of a local pharmaceutical industry[85];
- Increased penalties for traffickers (who from now on risk a fine of $3,600 and five years in prison[86] as opposed to previous fines of $80 and 3 – hypothetical – months in prison[87]).

According to the studies which have been carried out within Nigeria, the results of these efforts have been startling. In 2007, the share of poor-quality medicines among the total imported fell to 16% and is thought to be dropping still further[88].

It would be dangerous to present Nigeria as a model to be followed. First of all, because the battle is far from being won, while the numbers of massive seizures are still growing and Nigerian criminal networks are always among those cited in connection with trafficking of all kinds. Then again because this fight can have secondary outcomes, which have to be understood before they can be countered. Now that NAFDAC is known in the region as a reliable body for the inspection of medicines, the counterfeiters have no hesitation about plagiarizing its label of quality guarantee and fixing it to their fake products. The Nigerian case does, however, show that the situation is not beyond hope and that it is possible to take steps against the enormous spread of fake medicines over a decade. Following in Nigeria's footsteps, Ghana has also launched a far-reaching campaign in its fight against counterfeit medicines. Although their campaigns are of more recent date, their impact is already

[83] According to information received in 1994, prominent among these countries were Ghana, Sierra Leone and the Ivory Coast. K.M. Lybecker, "Rx Roulette: Combating Counterfeit Pharmaceuticals in Developing Nations", in *Managerial and Decision Economics,* Vol. 28, No. 4/5, June-August 2007, pp. 509-520.
[84] In 2008 a ban was placed on importing the products of 19 Chinese and Indian companies into Nigeria. See: O. Chinwendu, *The fight against fake drugs by NAFDAC in Nigeria*, 44th International Course in Health Development (ICHD), Royal Tropical Institute, Vrije Universiteit, Amsterdam, 2008.
[85] UNICRI, 2012.
[86] O. Chinwendu, The fight against fake drugs by NAFDAC in Nigeria, op. cit.
[87] R. Bate, "The Deadly World of Fake Drugs", *op. cit.*
[88] *Ibid.*

making itself felt in the markets of the capital[89]. Ghana has succeeded in developing an effective system for giving advanced warning of imports of medicines[90] and benefits from the support of a specialist team from the United Nations Office against Drugs and Crime. The two French-speaking countries examined for our study are, conversely, still vulnerable to fake medicines, which may seem paradoxical in view of the precautions taken, at least in theory, to control the importing of pharmaceutical products.

Attempts to encourage these States to join forces at a regional or continental level to forge a coordinated and united response to this problem, which requires more than efforts or laws at a national level, have not yet achieved satisfactory results. By way of example, a round table on fake medicines in West Africa was held in Ouagadougou between September 27th and 29th, 2011: its final report recommended in particular that a strategic regional plan of action be adopted and regional legislation be drawn up dealing with the subject of fake medicines. Two years on these recommendations have not produced any concrete results, given the "*high degree of reluctance and resistance linked to interests concealed behind that trafficking*"[91]. The ECOWAS also set up a working group to look at this question[92], bringing together pharmacists from the member countries: their regional plan of action is currently being prepared. Over and above these rather cumbersome political processes, necessary but short on definite conclusions, specialized international bodies are coming forward with all manner of initiatives. Numerous efforts are being made by the IRACM or the World Customs Organization to provide better training for customs officials in the detection and seizure of counterfeit medicines[93]. It is, however, only political will of a clear and determined nature maintained over several years which can fight effectively against this trafficking… but there lies the rub, most probably. Despite the dramatic consequences for the health of the general population, which remains to a large extent unaware of this threat, high-ranking politicians seem to have little enthusiasm for sharpening their weapons against this gigantic fraud, which can be

[89] R. Bate, K, Hess, "Anti-malarial drug quality in Lagos and Accra – a comparison of various quality assessments", in *Malaria Journal*, No. 9, June 2010.
[90] Conversation with an expert from the IRACM, December 2013.
[91] Conversation with Christophe Rochigneux, pharmacist and technical advisor for the WHO, posted to Burkina Faso and then to Benin; December 9, 2013.
[92] Known as the Committee for the Fight against the Faking of Medical Products affiliated to the ECOWAS, this group was created in April 2013 within the framework of the West-African Health Organization (OOAS in French) and set itself the task of "*ensuring supervision for the implementation of the Regional Strategic Plan for the fight against counterfeit medical products and illicit trade in them within the ECOWAS area*". See: *Bulletin de liaison de l'OOAS,* No. 1, April-June 2013, available on: http://www.wahooas.org/IMG/pdf/Bulletin_Liaison_OOAS-2.pdf.
[93] Other campaigns underway include the WHO IMPACT initiative "based on the voluntary participation of 193 States, which are members of the WHO, and international organizations, national regulatory authorities in the health field, police and customs organizations, NGOs and associations representing manufacturers and distributors in the pharmaceutical industry, health professionals and patient groups. These groups are working to improve harmonious co-ordination between the countries concerned, so as eventually to put an end to the production of fake medicines, trading in the latter and their sale" (Definition quoted from the IMPACT brochure).

very profitable, both in terms of customs rights and imports taxes[94], on the one hand, and of illegal revenue and power, on the other.

[94] C. Zimmerman in the radio programme, “Le débat africain”, A. Foka, *RFI*, February 6, 2012.

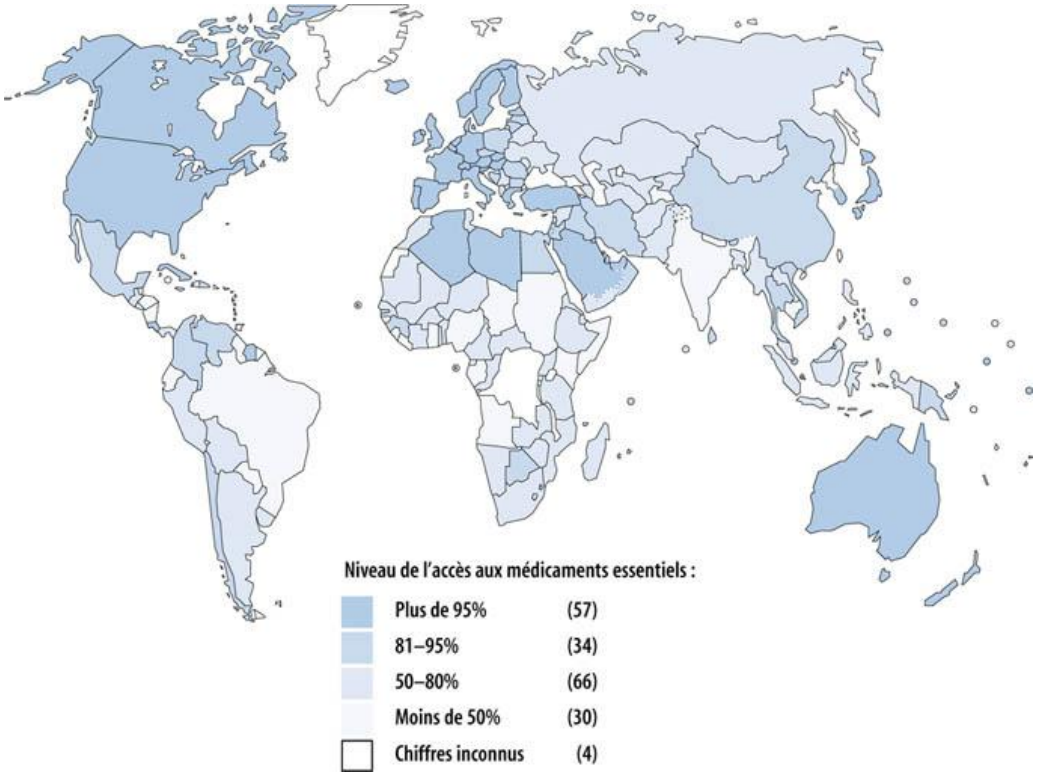
Appendix 1: Health impacts of counterfeit medicines

Type of "Counterfeit" Medicine	Impact on Health
Problems linked with content quality[95]	
Medicine containing the correct active ingredients but in reduced doses.	Development of resistance to usual treatment.
Medicine without active ingredients.	In the best case, placebo effect. In the worst, deteriorating health which could end in death.
Medicine containing dangerous substances.	Risk of fatal intoxication, deteriorating health of the patient.
Interference with Packaging	
Modification of expiry date.	Medicine of inferior quality, which could lead to deteriorating health or death.
Counterfeit packaging (copying of branded packaging, misleading information on actual contents, etc.	Depending on content.

[95] Consult on this topic: www.safemedicines.org/2012/03/no-drugs-at-all-.html.

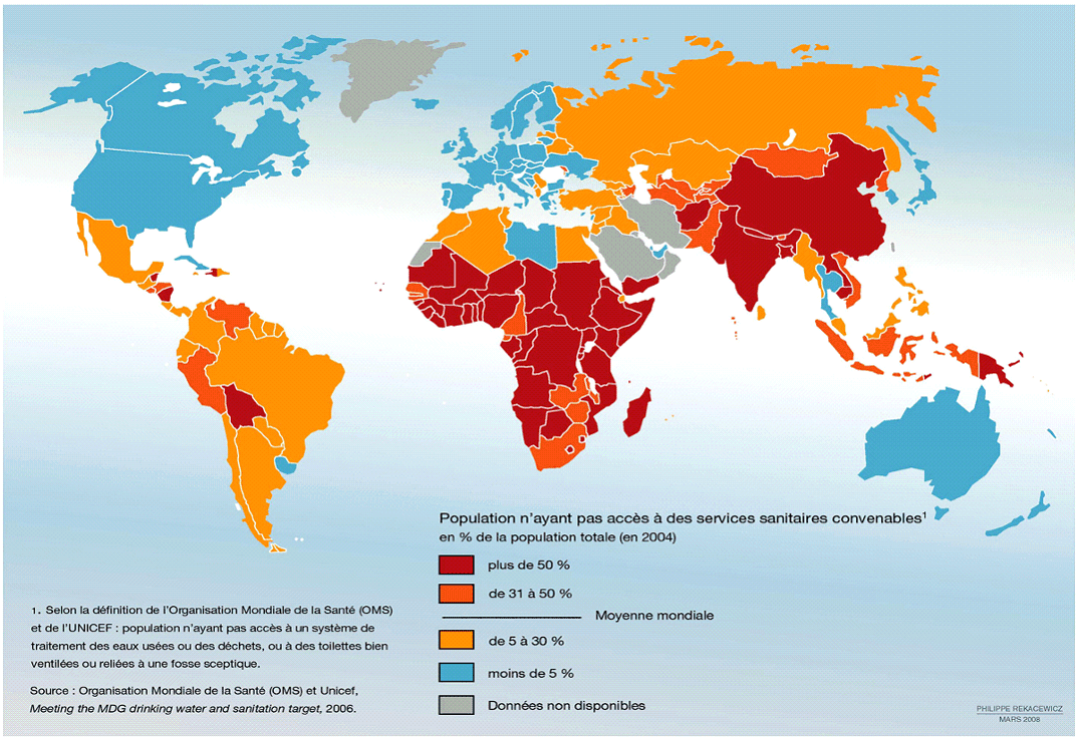
Appendix 2:
Access to health care in Africa

Map 1: Inequality of access to essential medicines



Source: *Stratégie pharmaceutique de l'OMS: Cadre d'action pour les médicaments essentiels et politiques pharmaceutiques, 2000-2003*, WHO, 2000, see: http://apps.who.int/medicinedocs/en/de/Js2282f/8.2html.

Map 2: Inequality of access to acceptable health services



Source: F. Keller, " Les nouvelles menaces des maladies infectieuses émergentes" French Senate Report, No. 638 (2011-2012), 2012, see: www.senat.fr/rap/r11-638/r11-638_mono.html.

Appendix 3: Organizations involved in the fight against fake medicines in Africa and quoted in this study

International Organizations

Institute of Research against Counterfeit Medicines (IRACM)

Interpol

United National Office against Drugs and Crime (UNODC)

World Health Organization (WHO)

World Customs Organizations (WCO)

United Nations Interregional Crime and Justice Research Institute (UNICRI)

African Organizations

African Association of Drugs National Purchasing Centres (ACAME in French)

Economic Community of West African States (ECOWAS)

Food and Drugs Authority (FDA, Ghana)

Nigerian National Agency for Food and Drug Administration and Control (NAFDAC, Nigeria)

West African Health Organization (OOAS in French)