



# NIGER: Communicable Diseases Risk Assessment July 2005

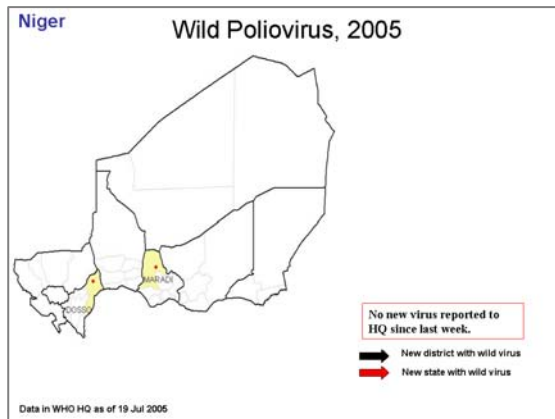
## Basic background and description

Niger is a vast but poor landlocked country with an estimated population of 11.9 million concentrated in a narrow band of arable land along its southern border. The economy is dominated by rural subsistence agriculture, herding, the declining uranium-mining sector, and informal trading activities. The primary sector (about 40 percent of GDP in 1999) is dominated by rain fed agriculture, while livestock production accounts for about a third of the value added in the sector. Of the national actively employed population, 84% of men and 97% of women are involved in growing crops or raising livestock.

In 2004 Niger was ranked 174 out of 175 countries on the UNDP's Human Development Index. Sixty-three percent of Niger's population lives on less than a dollar a day and a per capita gross domestic product (GDP) of US\$200 in 2003. Social indicators are low, as indicated by data on child mortality (155), life expectancy (46), literacy (17), and primary school enrolment (40). Nigerans are much poorer today than they were thirty years ago: GDP growth has been highly volatile and very low on average, while the population has more than doubled.



## Communicable Diseases epidemiology



Poor rains and locust invasions with subsequent poor harvests in 2004, compounded by drought in 2005, have led to a major food crisis and humanitarian emergency in Niger.

**Communicable diseases (CD) are likely to be major killers during this humanitarian emergency due to increased vulnerability from malnutrition**, and further compounded by lack of safe water and poor sanitation, population movement and resettlement in temporary shelters with overcrowding, and poor access to health care.

All tropical diseases endemic to Sub-Saharan Africa have been documented in Niger, with regular outbreaks of vaccine-preventable diseases (measles, meningitis), and water-borne and diarrhoeal diseases (cholera, shigellosis, typhoid).

Acute respiratory infections, vector-borne diseases (malaria, yellow fever, African sleeping sickness, lymphatic filariasis,

onchocerciasis), TB and HIV/AIDS are important public health problems in the country.

Malaria alone, of which 90-95% is due to *P. falciparum*, is responsible for 30% of outpatient consultations and 50% of deaths in children under 5 years. Though remarkable results for guinea worm eradication have been achieved over the past decade, the country has not achieved eradication status. Additionally, Niger is among the 6 countries globally that have remained endemic for wild poliovirus to date.

## Risk factors for increased CD burden

- Poor access to health services:** Health facilities are extremely limited in Niamey and urban centres, and completely inadequate outside the capital. Although physicians are generally well trained, even the best hospitals in Niamey suffer from inadequate facilities, antiquated equipment and shortages of supplies (particularly medicine). Emergency assistance is limited.
- Population movement:** The indigenous population is nomadic in nature, travelling mainly between Nigeria/Chad/Benin/Burkina Faso/Mali. Great variations in population density exist. The lowest densities are found in the desert regions, especially in the northeast, and the highest are found along the Niger River. Niamey, the capital and largest city, is located in the south, as are the other large cities of Zinder, Maradi, and Tahoua.
- Vaccination coverage:** Vaccination coverage for the all routine immunization antigens (OPV, DPT, TT, Yellow fever) is below WHO recommended levels. A nationwide mass **measles** campaign was conducted in December 2004, reaching 90% of the population (with the exception of Diffa and Agadez), achieving 95% coverage in the 6-month through 14-year target age group.

4. **Food shortages/malnutrition:** Even before the current crisis, 40% of Niger's children were already suffering from moderate or severe stunting (indicators of chronic malnutrition poor nutrition). UNICEF estimates that 150,000 young children are now suffering from severe malnutrition and a further 650,000 have become extremely vulnerable, especially to communicable diseases.
5. **Lack of safe water, poor sanitation:** 41% of the population has no sustainable access to an improved water source.
6. **Seasonality:** Severe malnutrition is common in Niger's rural areas, especially during the 'lean period' (June, July and August), when grain stocks are at their lowest and harvest has not yet begun. Additionally, meningococcal meningitis outbreaks tend to occur in the dry season, **cholera** outbreaks towards the end of the dry/early rainy season (June – September), and **malaria** incidence peaks in August – September.
7. **Outbreaks documented:**



Year	Period/season	Disease	Region	Cases/deaths/CFR	Pathogen
2004	Apr-Jun Jul-Aug	Cholera	Tillabéri	1 462 cases, 29 deaths CFR: 2.0%	<i>Vibrio cholera</i> 01 El Tor Ogawa
2003	Sep	Cholera	Maradi	34 cases, 2 deaths CFR: 5.9%	<i>Vibrio cholera</i> 01 El Tor Ogawa
2003	Feb - Mar	Meningitis	Magaria, Aguié Matameye, Madarounfa, Madaoua, Tahoua, Mirriah	2 056 cases, 195 deaths CFR: 9.5%	<i>Neisseria meningitidis</i> serogroup A.
2002	Jun - Aug	Cholera	Gaya/Dosso	202 cases, 10 deaths CFR: 4.95%	<i>Vibrio cholera</i> 01 El Tor
2002	Apr – May	Meningitis	Zinder/ Matameye Dakaro Guidan-Roundji	3 518 cases, 308 deaths CFR: 8.8%	<i>Neisseria meningitidis</i>
2001	Aug – Sep	Cholera	Fillingué/Tillabéri Tahoua	194 cases, 16 deaths CFR: 8.3%	<i>Vibrio cholerae</i>
2001	Jan – Mar	Meningitis	Gaya/Dosso Madoua Niamey	1 795 cases, 137 deaths CFR: 7.6% *(In June: 10 cases W135).	<i>Neisseria meningitidis</i> *June samples: <i>N. meningitidis</i> W135 (40% of samples)

(Data source: WHO/CDS/CSR – Outbreak: Alert and Response Operations and WHO/CDS/CPE – Global Task Force on Cholera Control, 2005).

Over the last 30 years, **cholera outbreaks** have been recorded mainly in Tillabéri, Niamey, Dosso, Maradi, Tahoua and Diffa. Overall cholera cases notified (and CFRs) in the last 5 years: 2178 (2.6%) in 2004, 297 (3.8%) in 2003, 236 (5%) in 2002, 81 (1.2%) in 2001, 225 (16.9%) in 2000.

**Measles outbreaks** have been recurring problem in Niger, with the last major one in 2003. A nationwide mass measles campaign was instituted in 2004, and despite a major outbreak in neighbouring northern Nigeria in 2005, no cases were reported in Niger.

**The major communicable disease threats in this crisis are malaria and diarrhoeal diseases (particularly cholera and shigellosis).**

#### Planned CD prevention and control measures in 2005

Polio vaccination campaigns: NIDs just completed. West Africa synchronized NIDs (Nov - Dec 2005).  
Phased measles mortality reduction vaccination campaigns (catch-up): last phase Dec 2005.  
WHO/UNICEF: water quality improvement, nutrition and MOH health system support.

#### Other planned campaigns in 2005

WFP: Food distribution to populations affected by current drought and/or 2004 locust invasion.  
FAO campaign: Emergency provision of animal fodder, cereal and pulses seeds for planting.

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