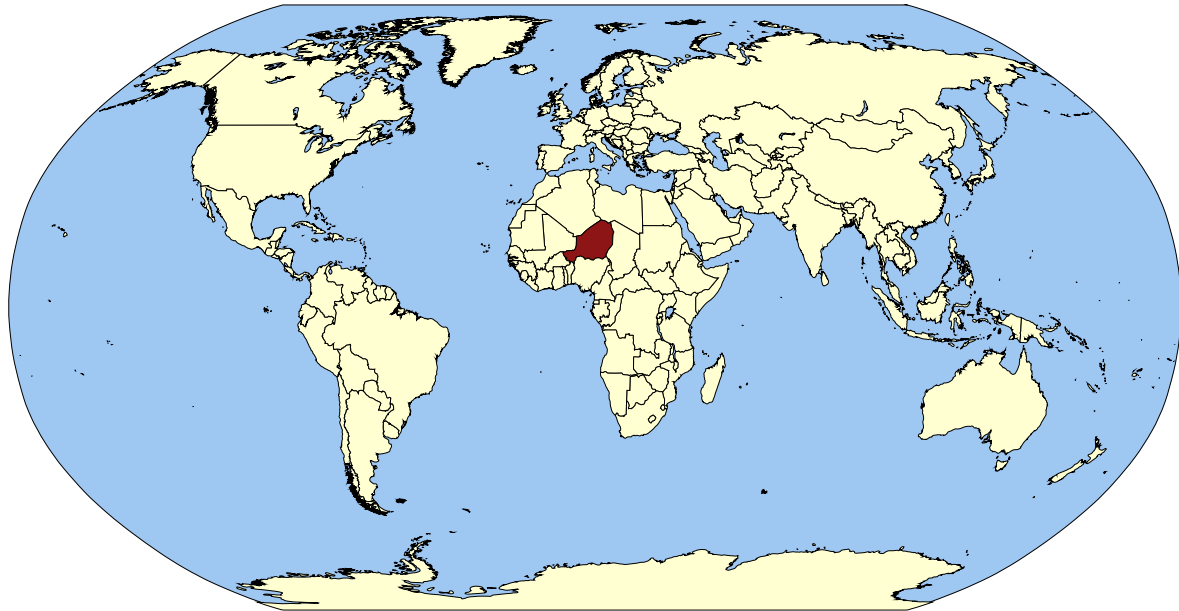


# Niger



## The History of Schistosomiasis in Niger

Schistosomiasis is endemic in Niger, particularly in the west near the Niger River, though a mass drug administration (MDA) campaign over the last decade has reduced prevalence by about half of its baseline levels. Both *Schistosoma haematobium* and *S. mansoni* are present, though *S. haematobium* is historically more common (1). Nationwide prevalence was first estimated at 26.7% in 1986 (2), then at 27% in 1995 (3) at 27% again in 2003 (4), at 13.6% in 2010 (4), and at 15.2% in 2012 (1).

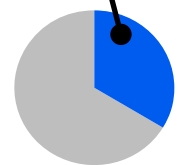
The highest levels of local prevalence are found in communities along the Niger River (5). For example, in a 2008 study, the Niger River Valley showed many villages with >50% schistosomiasis prevalence (6). Proximity to irrigation canals also has been a major risk factor in Niger: in the capital city of Niamey, researchers have found higher risk of schistosomiasis infection from canal contact than from contact with the river itself (7). In the same region, three-quarters of mothers primarily used canal water to wash their children (8). The development of water resources could prove problematic for schistosomiasis control in the future: as of 2006, construction of over 100 small dams had been planned near the major hydroelectric Kandadji Dam project (9).

## Schistosomiasis in Niger [7]

96% of people requiring preventative chemotherapy received treatment

34% of the population requires preventative chemotherapy for schistosomiasis

50% of the population that requires treatment are school aged children



## Overview of Niger [2]

- » Population in 2015: 18,045,729
- » Official Language: French
- » Capital: Niamey
- » Semi-Presidential Republic
- » Percentage of Population with Access to Improved Drinking Water in 2015: 58.2%
- » Percentage of Population with Access to Improved Sanitation in 2015: 10.9%

## Prevalence of Schistosomiasis

One worrisome trend in Niger has been the emergence and spread of *S. mansoni* since 1988. After the first case of this species in Niger was recorded in 1988 (10), in 2003 the spread of *Biomphalaria pfeifferi* snails, the intermediate hosts of *S. mansoni*, prompted speculation that *S. mansoni* could spread rapidly if introduced (11). Indeed, in 11 villages along the valley, researchers recorded an increase from 5.9% *S. mansoni* prevalence in schoolchildren in 2002 to 19.5% prevalence in 2003 (10), and a separate study from 2010 found 43.8% *S. mansoni* prevalence in children and 52.1% *S. mansoni* prevalence in mothers at one village along the river (8). Though these are isolated cases, the advance of *S. mansoni* in Niger should be watched with caution, particularly in the Niger River valley (8).

## Control of Schistosomiasis

In October of 2003, Niger was selected as one of six countries to receive full support from the Schistosomiasis Control Initiative (SCI) (12). This control program aimed to reduce schistosomiasis morbidity to a level at which it would not constitute a public health problem (9). In particular, Niger decided to target the at-risk groups of pregnant and/or lactating women (12). The program's primary strategy was school-based and community-based distribution of praziquantel and albendazole (9). Throughout Niger, the following number of individuals were treated each year as part of the SCI: 672,000 in 2004, 2,010,000 in 2005, 1,560,000 in 2006, 2,066,000 in 2007, and 5,284,000 in 2008 (12). The SCI's work demonstrated success - in addition to the country-wide prevalence reductions, local surveys found substantial reductions in communities receiving treatment (5), and the average treatment cost was only \$0.58 per dose (13). However, re-infection with schistosomiasis following chemotherapy has long been problematic in Niger. The first mass treatment trial in the country, which treated 357 individuals in a single village in 1983, had a 34% reinfection rate after only 3 months (14). A later study saw an average reinfection rate of over 50% 7 months after treatment, suggesting the need for snail control and sanitation as well as chemotherapy (15).

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