Reviewer's report

Title: Water sources as reservoirs of Vibrio cholerae O1 and non-O1 strains in Bepanda, Douala (Cameroon): relationship of isolation and physico-chemical factors.

Version: 3 Date: 18 October 2013

Reviewer: David A Sack

Reviewer's report:

This paper describes the isolation of V cholerae from many water sources in an area of Cameroon near the coastal city of Doula. The paper is impressive because they found such a high rate of contamination of water with V cholerae, both O1 and non-O1, nonO139 types.

Major Compulsory Revisions

In the Method section:

1. The authors should provide more details on the microbiology methods. This manuscript and the reference cited (Bag, et al) indicate that 10 ml of water was added to 2x enrichment broth. Generally, much larger volumes of water (500 ml) would be filtered through a membrane filter and the filter would then be incubated in enrichment broth. The finding of such high rates isolation while culturing such a small volume of water is highly unusual. The authors should comment on this and confirm that the methods did not involve filtration of the water.

With relation to the Discussion section

2. The finding of many isolates sensitive to cotrimoxazole is unusual[1]. In other parts of the world, nearly all isolates are SXT resistant including Cameroon.[2] The authors should comment on this finding. Does this indicate that these environmental strains are different from the clinical strains

3. In the discussion, the authors suggest that ciprofloxacin may be used for treatment of cholera patients. In fact this is widely used now in areas where the strains are resistant to doxycycline. Although the isolates from Cameroon were sensitive by disc diffusion, disc diffusion test does not differentiate between strains that are very sensitive and those with a higher MIC. This is important clinically because patients infected with the latter strains do not respond as well as those with the very sensitive strains.[3] While an MIC is the best way to determine these differences, if the authors had included nalidixic acid in their battery of antibiotics, this would have helped.

4. Limitations of the study should be mentioned. Some of these include the following.

• Testing for toxin production was not carried out.

• Since there was no isolates from humans, it is not clear if these strains were associated with human disease.
• The authors should at least indicate if there were human cases of cholera ongoing during the time of the study in this geographic area.


**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.