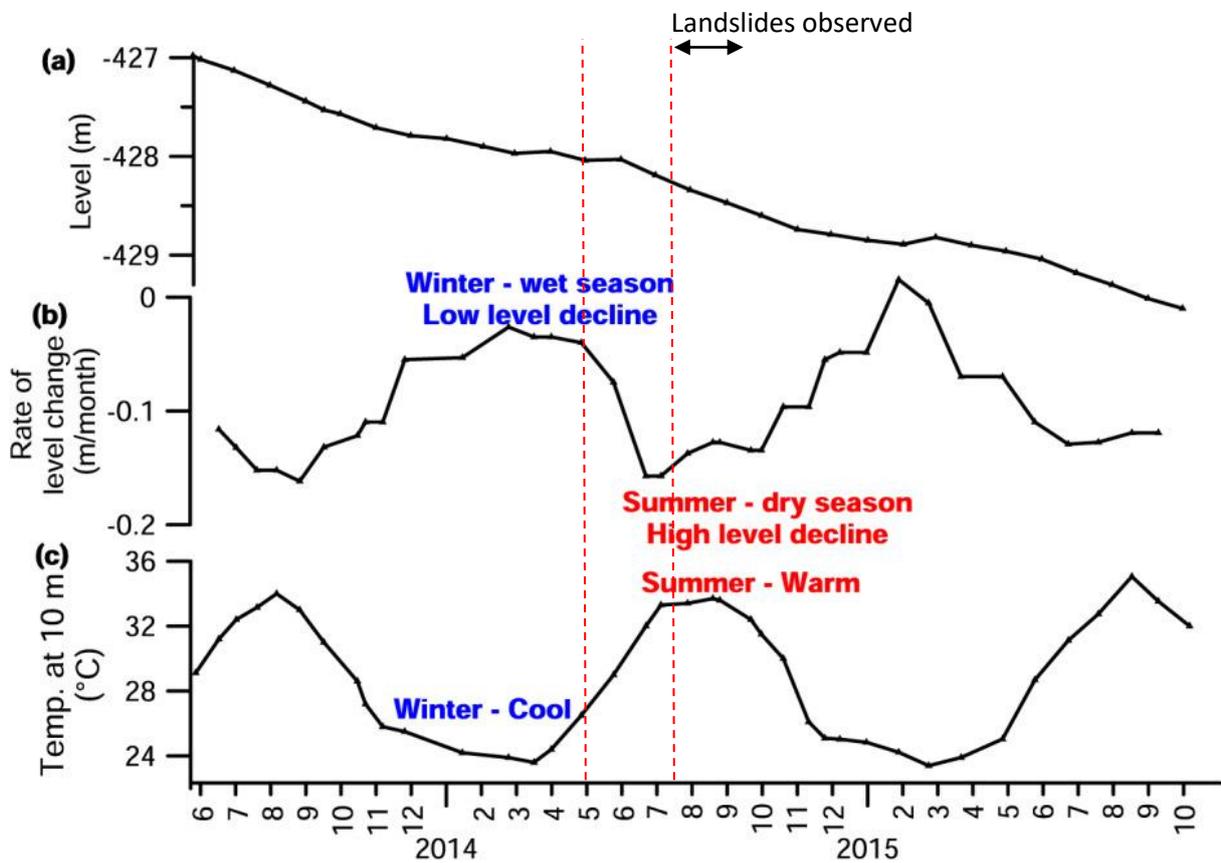


You link the landslides to "a sudden drop in Dead Sea level that usually occurs during the dry season". What data exist to support this idea of a sudden drop?

The pattern displayed below can be found in several publications showing the water level fluctuation per year.

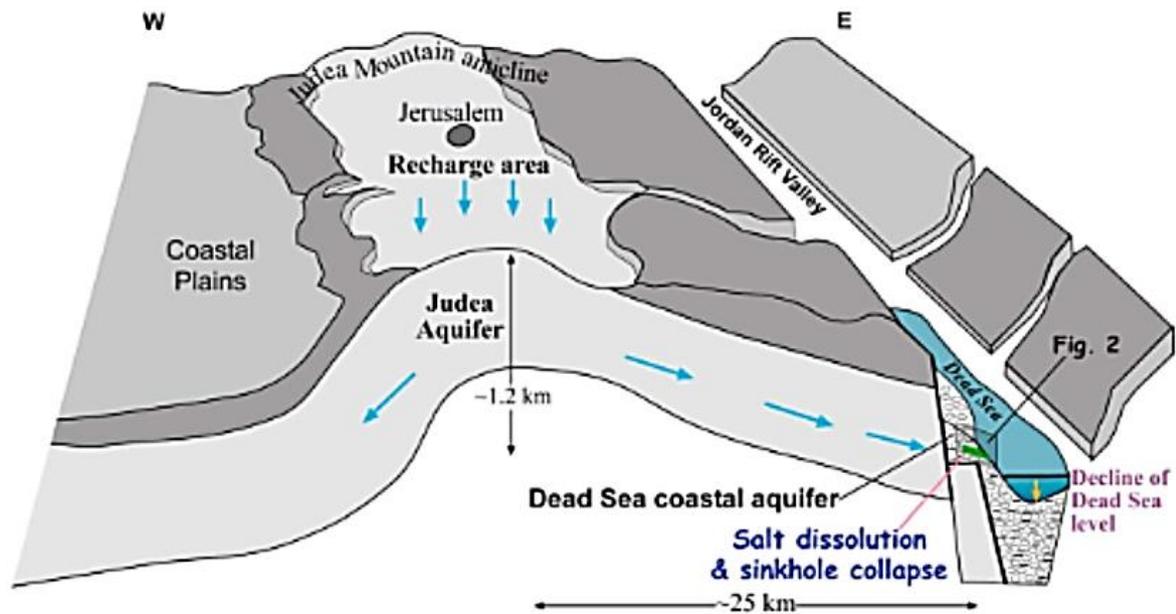


The seasonal external forcing. (a) Dead Sea level decline, (b) rate of level change, and (c) temperature of the epilimnion (10 m depth).

Source: Sirota, I., A. Arnon, and N. G. Lensky (2016), Seasonal variations of halite saturation in the Dead Sea, *Water Resour. Res.*, 52, 7151–7162, doi: 10.1002/2016WR018974.

Could there be a link to rainfall in the uplands with a time lag related to groundwater flow rate?

Yes. Something like that had been studied along the Western coast. That could be a research topic for the eastern coast too.



Abelson, M., Y. Yechieli, G. Baer, G. Lapid, N. Behar, R. Calvo, and M. Rosensaft (2017), Natural versus human control on subsurface salt dissolution and development of thousands of sinkholes along the Dead Sea coast, *J. Geophys. Res. Earth Surf.*, 122, 1262–1277, doi:10.1002/2017JF004219.

What about seismic events triggering the landslides?

Yes, that is possible as illustrated by the earthquake ML 5.2 in Dead Sea region, February 11th, 2004.

“At Hamamat Ma'en site (HM) (Fig. 5), approximately 7 km ESE of the epicenter, the PGA value recorded was 154 cm/s² (JSO, 2004). At this site a local landslide was recorded. We interpret these variations to represent local site effects in Amman, and possibly the other areas.”

Source: Eid Al-Tarazi, Eric Sandvol, Francisco Gomez (2006). The February 11, 2004 Dead Sea earthquake ML=5.2 in Jordan and its tectonic implication. *Tectonophysics* 422 (2006) 149–158.

The landslides we observed in the past were not triggered by earthquakes. However, if by coincidence, areas prone to slide are exposed to ground vibrations, it could trigger the failure.

The conclusion section should include a summary of the main scientific findings of this paper.

We will improve the conclusions section by adding the most relevant findings of our work:

- The continuous deformations field (strong subsidence) along the Sweimeh coastal zone.
- The spatial co-occurrence between the deformation field in the Sweimeh area and the damaged fault zone associated to the Amman – Halabat structure.
- The number of destruction caused by landslides, sinkholes and subsidence in the front beach of the resorts visited in the frame of this study.