## Salt tectonics of the Transylvanian Basin (Romania)

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The Transylvanian Basin is an intra-Carpathian back-arc basin situated in the hinterland of the Carpathians fold and thrust belt. The Mid to Late Miocene back-arc megasequence comprises evaporites (mostly halite) covered by up to 3 km thick siliciclastics.

The early salt tectonics was driven by the differential load of post-salt sediments. Relatively weak shortening observed in the deeper parts of the basin was probably coeval with extension on the shelf. The nature of early extension is difficult to address because of the strong overprint of later events, including erosion and inversion. However, interpretation suggests that reactive/passive diapirism might have been already taken place.

The Late Miocene continental collision in the Eastern Carpathians is associated with the rising Carpathians and Late Miocene to Pliocene arc volcanism. Uplift of the Eastern Carpathians induced up to 5 degrees westward tilt of the basin margins, which induced large-scale Mio-Pliocene gravity spreading of the salt overburden. The spreading was enhanced by the load and heat-flux of back arc volcanics also.

The ‘mega-slide’ comprises three structural domains, as follows: extensional weld (upslope), contractional folds (central) and contractional toe thrust (downslope). Early extensional diapirs were shortened and their rim-synclines highly inverted. The central folds are mostly the result of late shortening. Basement involved thrusting uplifted the toe thrust domain by the Late Pliocene.

Salt structures resemble the upslope extensional and downslope compressional domains of gravity driven fold belts developed on passive margins. However, we emphasize that the triggering mechanisms are quite different.