Galaxies used to be called 'Island Universes' to distinguish them from our own Milky Way with its myriad stars and nebulae. But they are far from that. New data are revealing that spiral galaxies are venting material into their halos, forming super-galactic ecosystems. Just how this occurs is still a subject of debate, but a key ingredient appears to be the magnetic fields that thread the region and may even connect to broader-scale intergalactic fields. From inflows to outflows, the agitated spirals are no longer 'islands' but active, dynamic systems that refuse to sit still.