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# CLIMATE CHANGE

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## **Incremental control of world Albedo by massive salt leaching using the ancient purpose engineered Qanat- Karez- Falaj technology to control fractional coverage of crystalline white salt precipitation over vast areas of existing endorheic basins**

**David Bloch**

M R Bloch Salt Archive, Israel

Huge desert endorheic basins with very substantial areas of flat evaporation pans were in operation specifically for the precipitation of white crystalline sodium chloride. Maintaining a thin white crust layer of salt at critical hot seasons of the year over these huge areas would increase the world albedo to enable precise control of the total short/long wave reflection, in addition to the high albedo of the polar regions. The surface crust of an inland Sabkha basin typically is made up of layers of salts that have re-crystallized and settled or precipitated during the evaporation process of controlled Qanat system flood waters. Leached Salts dissolve quickly in a desert endorheic basin, and over a short intensely hot period, the process of re-crystallizing the salts can produce purer and more concentrated, layered playa cakes. The dissolved salts leached out of the underlying layers in the vast desert basin flats, are intermittently precipitated back on to the basin surface, predominately sodium chloride crystals, one after the other leaving the familiar brilliant white salar playa. The original ancient engineered design of the Qanat and its multiple aligned bore-holes was to control desert endorheic basin flooding without destroying the salt mirror playa or causing erosion of the flat evaporation fields. The Qanat water was primarily needed to extract salt, rather than for simple domestic irrigation. Additionally considerable quantities of subsoil brines existing in such basin water tables would ensure brine supplies, as is demonstrated by the new potash plants in the Tarim basin using the ancient Qanat technology. The grain size of white sodium chloride crystals may be controlled in a similar way to the fine Polar snow crystals which also provide an improved albedo index.

### **Biography**

David Bloch is the founder of M.R.Bloch SALT ARCHIVE – Owner of Chemical Engineering consultancy- MBL Separation Engineering. R&D - Research into Salt [Sodium Chloride] history, economics, religion, physiology, production and general influence upon the civilization of mankind.

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