

**Geology and environment; earth first?**

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The chemistry in its early history determined the origin of life on this planet; geology and climate determined where people went from hunter/gatherer to farmer. Geology determines the availability of energy and other resources. Geology puts limits on the total system we call Earth (dolphins probably call it Ocean), limits to population and consumerism. Geology gives us many basic needs but indirectly also many problems. An orebody can be considered a natural toxic dump that probably would do the least damage if it were left buried. In a natural system all components of the ore would somehow be used by organisms, or redeposited elsewhere; we use only a small portion of it and discard the rest. It is this rest that causes all the problems resources and other industries are facing today. We have to learn to use this rest in a positive way at all cost. Large volumes of

contaminated soil can be treated as ore, the usable products extracted, the soils returned *in situ*, and minor "waste" is "stored" for future treatment (waiting for a process or miracle; it is being done).

Geology also supplies us with data to quantify changes in our climate, sea level, atmosphere and ocean composition that can be used to anticipate future changes (natural and man-made). It teaches us how organisms react to environmental change; do they adapt, migrate, or become extinct? As earth scientists we have a different view of our planet and probably know more about it than the average scientist. It is rewarding to be involved in educating children, teachers, and nature and environmental groups. It will make everyone aware that it has to be Earth First, and given the opportunity nature will take care of itself!