Answer to question 3:
Comparison of acoustics and optics in water:

Wavelengths:
Acoustics from 1Mhz to 1hz, wavelength=sound speed/frequency→ 0.0015 to 1500m.
Optics visible:400 to 700nm.

Speed:
Sound in water ~ 1500m/s, light~225,000,000m/s

Polarization:
Within the water light (a vector wave) can be polarized, sound (a scalar wave) is not.
Within solids (e.g. sediments), sound can be polarized.

Background intensity:
Light: solar constant (light from sun arriving to the top of the atmosphere)~1.4 10^3 W m^{-2} m^{-1}
Sound: $P_{ref}=10^{-6}$ Pa → $i= |P_{ref}|^2_{rms}/\rho/c=3.2\ 10^{-19}$ W m^{-2} m^{-1}
Explains why sound has not been used to harness its energy…

Attenuation:
Visible light ~$1m^{-1}$ in much of the water column.
Sound ~0.001dB/km at 100Hz to 200db/Km at 1mHz ~ 10^{-7} m^{-1} at 100Hz to 0.02 m^{-1} at 1mHz.