

THE SEVERN RIVER ASSOCIATION

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Get ready to deal with rising sea levels

Annapolis, Feb. 18 – There's no denying that global sea levels are on the rise world wide and that the effects are much more pronounced in the Chesapeake Bay region. Sea level's already risen a foot in Baltimore harbor and could rise close to another foot by 2020 – perhaps as much as seven feet by 2100.

That's the sobering scenario outlined during the Severn River Association's SRA's Educational Series meeting Feb. 18 by Dr. Donald Boesch, President of the University of Maryland's Center for Environmental Studies.

Reason: Today's higher sea levels are caused by greenhouse gases (GHGs) releases during the 20th century by Western industrialized nations, particularly the U.S. “It is unequivocally” caused by global warming, Dr. Boesch said, because as the planet warms, so do the oceans, and warmer water expands.

In the last 100 years, sea level in Baltimore harbor rose 12 inches between 1903 and 2006. The rate of sea level increase will accelerate through 2020, 2050 and beyond -- even if the world were to cap GHG emission releases in the near future. This rapid rise followed a period of stable sea level that lasted thousands of years.

All of the Chesapeake Bay watershed will feel the effects of rising sea levels. The Bay and Severn River will inundate marshy low-lying areas from Highland Beach, Bay Ridge to City Dock and points inland. The beautiful cliffs along the Severn River will be threatened as higher sea levels accelerate erosion, Dr. Boesch said. Even harder hit will be Virginia's coastal and low-lying areas around Norfolk, its Eastern Shore and areas where Virginia's rivers meet the Bay.

Dr. Boesch, Professor of Marine Science at the Center, told the packed SRA meeting that this rapid rate of sea level rise will continue well into the 21st century as China, India and Southeast Asia expand their reliance on coal-fired power plants.

Unless the rate of GHG releases slow, worst-case sea level increase scenarios of six and seven feet are expected to occur due to a mix of complicated events, such as the:

- melting of glaciers in Greenland and Antarctica
- warming of the ocean due to GHG-caused global warming
- slowing of the Gulf Stream, which keeps ocean water off shore, and
- tilting of Continental land masses that has Maryland and Virginia sinking.

The U.S. will experience more drastic and intense weather events, such as prolonged droughts, stronger storms and heavier downpours. Maryland will see an increased reliance by farmers on groundwater for irrigation while urban areas will struggle to secure fresh drinking water supplies.

Elsewhere, the weather shifts caused by climate change can create a “frightful” future for some areas.

For example, he says, imagine a burning hot desert summer in Phoenix, AZ, but with high humidity.

Solutions to these weather changes suggested by Dr. Boesch ranged from totally eliminating GHG emissions – worldwide – by not burning fossil fuels and converting to cleaner energy sources, to accepting the reality and preparing to deal with these climatic changes.

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The Severn River Association is the oldest river association in the U.S. and Anne Arundel County's only river group in continuous operation since 1911. SRA meets the third Tuesday of each month. The meetings are free. Residents and representatives of community associations are encouraged to attend, get involved and make their opinions on watershed issues known.