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Geoscience Bulletin Board – 13 May 2019 – compiled by Elaine J. Hanford

Potential incipient subduction zone forming off Iberian Peninsula in eastern Atlantic (video)

- <https://www.msn.com/en-us/video/science/a-tectonic-plate-may-have-split-apart-off-portugals-coast/vi-AAB1X1P>
- <https://phys.org/news/2019-05-geologists-horseshoe-abyssal-plain-subduction.html>
- <https://meetingorganizer.copernicus.org/EGU2019/EGU2019-6001.pdf>
- <https://www.zmescience.com/science/geology/tectonic-plate-portugal-08052019/>

Airborne gravity surveys refine system of topographic elevation – the modern geoid

- <https://eos.org/articles/airborne-gravity-surveys-are-remaking-elevations-in-the-u-s>

New methods to turn toxic asbestos mine tailings into innocuous carbonate rock

- <https://eos.org/features/the-carbon-market-potential-of-asbestos-mine-waste>

Dendrochronology reveals record of temperature seasonality

- <https://eos.org/articles/tree-rings-record-19th-century-anthropogenic-climate-change>

450-million-year evolution of 10-legged decapods – crabs, lobsters & shrimp

- <https://phys.org/news/2019-04-crabs-lobsters-shrimp-family-tree.html>
- <https://dtmag.com/thelibrary/arthropods-lobsters-shrimps-crabs-barnacles-and-the-pods/>

USGS Hawaiian Volcano Observatory team among finalists for 2019 Service to America Medals

- https://www.usgs.gov/news/usgs-scientific-team-selected-a-finalist-oscars-government-service?qt-news_science_products=4#qt-news_science_products

Suskityrannus hazelae – small Cretaceous *T. rex* relative found in New Mexico

- <http://www.sci-news.com/paleontology/suskityrannus-hazelae-07161.html>

Mt. Sinabung erupts with massive column of ash and smoke

- http://www.terradaily.com/reports/Indonesias_Mt_Sinabung_shoots_column_of_smoke_and_ash_into_sky_999.html

Interplay between atmospheric winds & ocean waters is major influence on strength & timing of South Asian monsoons

- <https://www.sciencedaily.com/releases/2019/05/190507145521.htm>

Totiglobus spencensis - New 500 myo species crucial step in echinoderm evolution

- <https://www.sciencedaily.com/releases/2019/05/190502163028.htm>

Complex geologic conditions contributed to Deepwater Horizon disaster

- <https://phys.org/news/2019-05-complex-geology-contributed-deepwater-horizon.html>

Radioactive carbon from nuclear bomb tests found in deepest ocean trench

- <https://phys.org/news/2019-05-radioactive-carbon-nuclear-deep-ocean.html>

Does the core of Earth behave like vinaigrette salad dressing?

- <https://phys.org/news/2019-05-earth-core-common-salad.html>

400-year record of El Niño events

- <https://phys.org/news/2019-05-impossible-year-el-nino-revealing.html>

Improved understanding of behavior of granular substances in natural processes – avalanches & sand dunes

- https://www.eurekalert.org/pub_releases/2019-05/ez-wsb050819.php

Crystallization involves two separate processes

- <https://sciencetrends.com/how-do-crystals-form/>

Rhyolitic lava flows in Yellowstone were “highly clustered in time” with episodic eruptions

- https://www.newsweek.com/yellowstone-eruption-history-clustered-1418952?piano_t=1

Floor of Lake Wakatipu mapped to assess tsunami threat

- <https://www.stuff.co.nz/environment/112565778/queenstowns-lake-wakatipu-floor-mapped-to-uncover-tsunami-threat>

Perspective: The importance of predicting EQs

- <https://www.newsmax.com/davidnabhan/cascadia-nasa-pwaves-san-andreas/2019/05/07/id/914954/>

Prospecting for new sources of lithium

- <https://www.sciencenews.org/article/search-new-geologic-sources-lithium-could-power-clean-future>
- <https://kalkinemedi.com/news/avz-minerals-upgrades-measured-and-indicated-mineral-resource-at-roche-dure/>

New method to improve imaging techniques for geophysical & materials studies

- https://www.eurekalert.org/pub_releases/2019-05/tuos-anm050719.php

Fossilization process of dinosaur remains

- <https://phys.org/news/2019-05-fossilization-dinosaur.html>

Self-healing cement offers potential pollution-prevention technology for geothermal industry

- <https://phys.org/news/2019-05-self-healing-cement-geothermal-industry.html>

Abandoned coal mines in the United Kingdom could provide geothermal energy

- <http://www.hydrogenfuelnews.com/abandoned-coal-mines-in-the-uk-could-provide-geothermal-energy/8537476/>

The importance of fault-line mapping

- <https://newsinfo.inquirer.net/1114682/fault-line-mapping-reduces-quake-damage-saves-lives-experts>

Earthquake swarms recorded at Yellowstone but not “ready to lay waste to the entire world”

- <https://www.techtimes.com/articles/242921/20190506/geologists-recorded-a-lot-of-movement-in-yellowstone-volcano-but-no-danger-of-eruption-yet.htm>

A short lesson on the history of geology & implications for York

- <https://www.ydr.com/story/opinion/2019/05/05/short-lesson-history-geology-and-its-local-implications/1113604001/>

What geology reveals about nuclear weapons in North Korea

- <https://theconversation.com/what-geology-reveals-about-north-koreas-nuclear-weapons-and-what-it-obscures-114055>

Book Review: 'Geology of Lassen Volcanic National Park'

- <https://www.zmescience.com/science/geology/tectonic-plate-portugal-08052019/>

Symposium held on Grand Canyon Geology & Geoscience Education

- <https://news.unm.edu/news/grand-canyon-geology-and-geoscience-education-public-symposium-set-for-april-18-20>
- <https://earthly-musings.blogspot.com/2019/05/the-1st-grand-canyon-geology-and.html>

TESLA warns of global shortage of minerals for production of electric vehicle batteries

- <https://www.teslarati.com/tesla-battery-mineral-shortage-warning-legislation/>
- <http://www.mining.com/us-senate-introduces-new-bill-boost-domestic-critical-minerals-supply/>
- <https://investingnews.com/daily/resource-investing/battery-metals-investing/lithium-investing/us-senators-lock-down-mineral-security/>

Government of Tanzania warned smugglers of minerals will face full force of the law

- http://www.xinhuanet.com/english/2019-05/08/c_138043771.htm

World Bank to assist in “sustainable” extraction of minerals for wind & solar projects

- <https://mercomindia.com/world-bank-extraction-minerals-wind-solar/>

Bulgaria awards 3-year industrial minerals exploration permit for Rayuv Kamak area

- <https://seenews.com/news/bulgaria-awards-kaolin-3-year-industrial-minerals-exploration-permit-653233>

Creswick gold project is large footprint gold system

- <https://www.proactiveinvestors.co.uk/companies/news/219898/ecr-minerals-identifies-more-quartz-than-expected-in-drilling-at-creswick-gold-project-219898.html>

Rock avalanche mobility controlled by characteristics of material in flow path

- <https://blogs.agu.org/landslideblog/2019/05/09/rock-avalanche-mobility/>

Testing Oxford sinkhole in Nova Scotia to predict final size

- <https://www.cbc.ca/news/canada/nova-scotia/geologists-begin-testing-the-oxford-sinkhole-to-predict-its-final-size-1.5127907>

Deep-sea tubeworms discovered in Atlantic Ocean 36 miles off coast of North Carolina

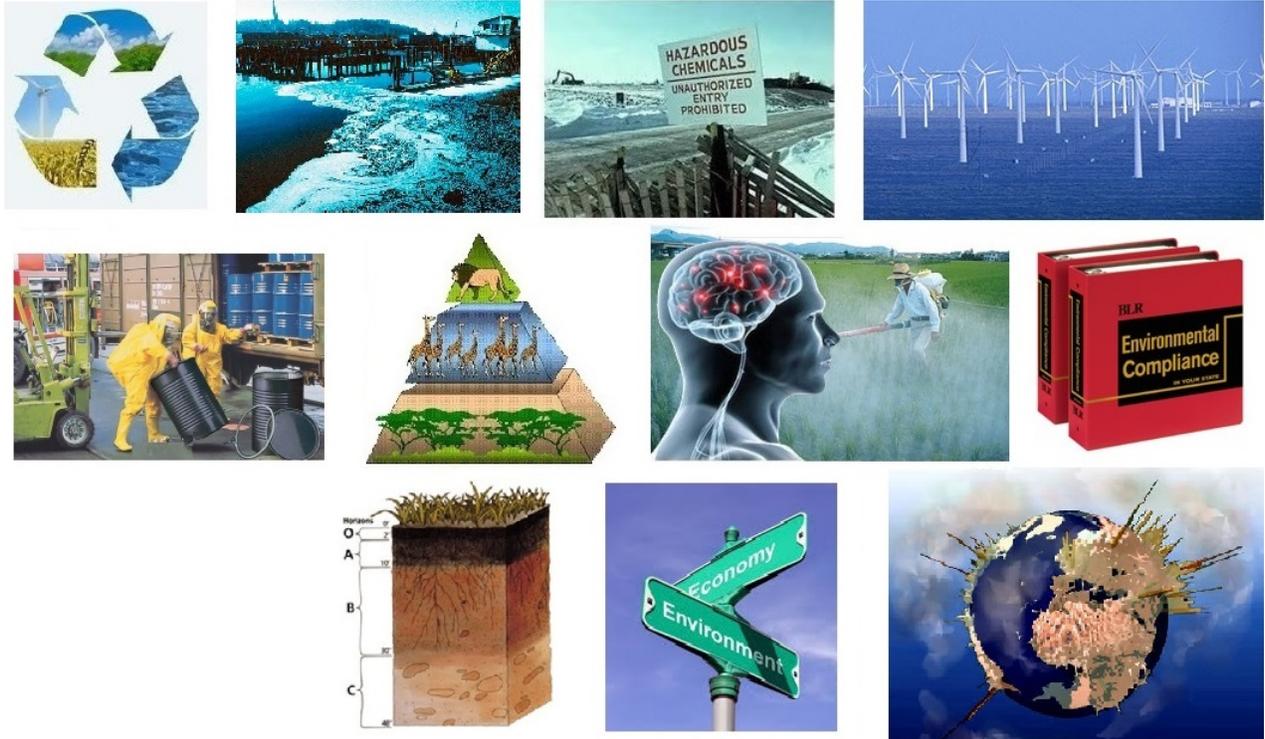
- <https://www.newsweek.com/strange-deep-sea-tube-worms-north-carolina-atlantic-coast-1420761>

2016 paper on Kumamoto earthquake contained falsified data & manipulated images - retracted

- <https://www.nature.com/articles/d41586-019-01466-2>

Fish evolved super-powered vision in deep ocean

- <https://www.sciencemag.org/news/2019/05/deep-dark-ocean-fish-have-evolved-superpowered-vision>



Environmental Science Bulletin Board – 13 May 2019 – compiled by Elaine J. Hanford

UN Report “proves that humans are the worst species” – devastating impact on nature

- <https://www.treehugger.com/conservation/massive-new-report-proves-humans-are-worst-species.html>
- Media release: <https://www.ipbes.net/news/Media-Release-Global-Assessment>
- IPBES Summary: https://www.ipbes.net/sites/default/files/downloads/spm_unedited_advance_for_posting_htn.pdf
- “guardians of Nature” under attack: http://www.terradaily.com/reports/Indigenous_peoples_guardians_of_Nature_under_siege_999.html
- <https://www.forbes.com/sites/davidbressan/2019/05/07/earth-already-experienced-five-big-mass-extinctions-now-humans-are-driving-the-next-one/#7adf0b9e7ed2>

Chernobyl will not be completely safe for many years to come

- https://start.att.net/news/read/category/news/article/newsweek-is_chernobyl_safe_a_realworld_rundown_ahead_of_hbo-newsweek

Red wolves are critically endangered – 4 pups born at Lincoln Park Zoo in Chicago

- <https://www.geek.com/news/four-critically-endangered-red-wolf-pups-born-at-chicago-zoo-1785600/>

Construction bids being accepted for LNG Lake Charles export terminal in Louisiana

- <https://www.chron.com/business/energy/article/Energy-Transfer-Shell-open-construction-bids-for-13817017.php>

Pattullo Bridge replacement received Environmental Assessment Certificate

- <https://news.gov.bc.ca/releases/2019ENV0017-000828>
- Documents: <https://www.projects.eao.gov.bc.ca/p/pattullo-bridge-replacement>

Insulated concrete forms (IFC) may be used to reconstruct storm damage in Springfield, Missouri

- <https://www.ozarksfirst.com/news/local-news/these-walls-are-made-for-withstanding-natural-disasters/1974565824>

“Mounting overcrowding & conflicts” with NPS operations results in ban on commercial tours

- <https://www.msn.com/en-us/travel/article/tour-guides-will-soon-be-banned-at-two-popular-nyc-sites/ar-AAARw6W>

Journey along El Camino del Diablo – the Devils Highway from Yuma to Ajo, Arizona

- <https://www.msn.com/en-us/travel/tripideas/the-forbidding-reputation-and-hypnotic-scenery-of-the-devils-highway/ar-BBWol3n>

Really big sandbags to protect portions of Manhattan from storm surge flooding

- <https://www.msn.com/en-us/weather/topstories/6-years-after-hurricane-sandy-heres-what-they-came-up-with-really-big-sandbags/ar-AAAVRO7>

Drug or alcohol overdoses in California prisons up 113% in 3 years

- <https://www.msn.com/en-us/news/crime/overdoses-in-california-prisons-up-113percent-in-three-years---nearly-1000-incidents-in-2018/ar-AAAVNfG>

Midwest floodwaters prevent US Army COE from construction operations

- <https://www.enr.com/articles/46814-midwest-floods-are-hampering-river-projects>

Disasters are getting more expensive – but natural events are not necessarily “worse” & building codes have long been inadequate

- <https://thehill.com/opinion/energy-environment/441890-natural-disasters-could-be-far-less-damaging-with-better-building>
- Report: <https://www.nibs.org/page/mitigationsaves>

New environmental review of Keystone XL pipeline to be completed despite construction delay

- https://billingsgazette.com/news/state-and-regional/u-s-says-it-will-complete-keystone-xl-pipeline-environmental/article_e4e13da0-f797-5b4e-8be0-af6ec996938c.html
- <https://ktul.com/news/local/court-delays-block-keystone-xl-pipeline-construction-in-2019>

New Zealand introduces legislation thinking “carbon neutral” is good to combat animal burps & farts

- <https://www.apnews.com/444fb8016c0e4603b6b85896f5dff423>

Perseverance cultivates purposefulness & boosts resilience

- <https://www.psychologytoday.com/us/blog/the-athletes-way/201905/perseverance-cultivates-purposefulness-and-boosts-resilience>

PCBs being banned in the 1970s but persist in the ocean

- <https://eos.org/research-spotlights/a-look-at-how-long-banned-pcbs-persist-in-the-ocean>
- Stockholm Convention:
<http://chm.pops.int/Implementation/IndustrialPOPs/PCBs/Overview/tabid/273/Default.aspx>

Yersinia pestis – bubonic plague outbreak in Mongolia

- <https://www.npr.org/sections/goatsandsoda/2019/05/07/721167330/bubonic-plague-strikes-in-mongolia-why-is-it-still-a-threat>

Amid measles outbreaks – States consider revoking religious exemptions for vaccinations

- <https://www.npr.org/2019/05/06/720673193/amid-measles-outbreaks-states-consider-revoking-religious-vaccine-exemptions>

The future of nuclear energy – smaller, cheaper & safer? – concerns about nuclear plant in Saudi Arabia

- <https://www.npr.org/2019/05/08/720728055/this-company-says-the-future-of-nuclear-energy-is-smaller-cheaper-and-safer>
- <https://www.npr.org/2019/05/06/719590408/as-saudi-arabia-builds-a-nuclear-reactor-some-worry-about-its-motives>

OMG – New York City may soon have “green new deal” type law

- https://www.huffpost.com/entry/nyc-green-new-deal_n_5cb8761ee4b096f7d2dcfc40

Do children really influence parental opinions on climate?

- <https://www.treehugger.com/climate-change/children-can-change-their-parents-opinions-climate-change.html>

Only 37% of longest rivers remain unimpeded and free-flowing from source to terminus

- <https://www.ehn.org/benefits-of-free-flowing-rivers-2636604106.html>
- <https://www.nationalgeographic.com/environment/2019/05/worlds-free-flowing-rivers-mapped-hydropower/>

Perspective: Time to break addiction to agricultural chemicals

- <https://www.ehn.org/chemicals-hurt-farms-2636511102.html>

Wolves (*Canis lupus*) more prosocial than pack dogs (*Canis lupus familiaris*)

- <http://www.sci-news.com/biology/prosocial-wolves-07165.html>

No agreement on final declaration of bi-annual Arctic Council meeting

- http://www.spacedaily.com/reports/US_climate_sceptics_send_shivers_through_Arctic_cooperation_999.html

Jerusalem trying to cope with dilemma of burgeoning street cat population

- http://www.terradaily.com/reports/Jeruselems_dilemma_over_hordes_of_stray_cats_999.htm

Decades-long drought continues in Somalia

- http://www.terradaily.com/reports/Millions_hungry_as_drought_grips_Somalia_charity_999.html

Ozone Monitoring Instrument on NASA Aura satellite detecting “fingerprints”

- http://www.spacedaily.com/reports/Ozone_Monitoring_Instrument_Team_Spots_Fingerprints_on_Earths_Atmosphere_999.html

New adsorbent membrane may facilitate removal of pharmaceuticals & personal care products from water

- https://www.eurekalert.org/pub_releases/2019-05/acs-sup050819.php

Need for new treatment techniques to counteract increase in antibiotics in wastewater

- <https://www.technology.org/2019/05/08/antibiotics-in-wastewater-ub-chemist-investigates-a-disturbing-trend/>

Route proposed for 3,700-mile Great American Rail Trail

- <https://www.travelandleisure.com/travel-news/great-american-rail-trail>
- <https://www.msn.com/en-us/travel/news/heres-the-proposed-route-for-the-massive-great-american-rail-trail/ar-AAB4zNb>
- <https://www.railstotrails.org/greatamericanrailtrail/>

Spring clean-up on Mount Everest yields 6,600 pounds of trash and 4 bodies – more to be done

- <https://www.msn.com/en-us/travel/news/theres-way-too-much-trash-on-mt-everest/ar-AAAM6Ry>

Beekeepers are being hit hard by poaching – thieves heisting entire colonies

- <https://www.nationalgeographic.com/animals/2019/05/bee-thieves-cost-beekeepers-thousands/>

Formation of air pollution in urban areas in the wintertime

- <https://phys.org/news/2019-05-view-wintertime-air-pollution.html>

Mexico says it will be gasoline self-sufficient by May 2022 & takes over construction of Dos Bocas oil refinery estimated at \$8B despite lowest bid of \$10B

- <https://mexiconewsdaily.com/news/government-will-build-new-refinery/>
- <https://www.reuters.com/article/us-mexico-gasoline/mexico-will-be-self-sufficient-in-gasoline-by-may-2022-president-idUSKCN1SG1E5>

Perspective: Why the high-speed passenger train in California is so far over-budget and beyond schedule – consider whether the project is necessary

- <https://www.constructiondive.com/news/what-future-high-speed-rail-developers-can-learn-california-bullet-train/554183/>

Obesity not just an urban problem – increasing in rural areas

- <https://www.nature.com/articles/d41586-019-01182-x>



Coastal Zone Management Bulletin Board – 13 May 2019 – compiled by Elaine J. Hanford

Developer could be fined \$25M for building high-priced instead of moderately priced hotel on coast

- <https://www.smdp.com/coastal-commission-could-issue-record-fine-to-shore-hotel/175345>

Perspective: Tweed Airport & coastal infrastructure resiliency – stresses “economic urgency”

- <https://ctmirror.org/category/ct-viewpoints/tweed-airport-and-the-case-for-investment-in-coastal-infrastructure/>

Two new coastal cruise ships unveiled – one in Peruvian Amazon & one in Indonesia

- <https://www.cruisecritic.com/news/4067/>

Meteotsunamis are small but can impact coastal areas

- <https://www.coastalreview.org/2019/05/new-tsunami-research-rides-on-small-waves/>
- Paper: <https://journals.ametsoc.org/doi/pdf/10.1175/BAMS-D-18-0206.1>

New model for predicting coastal flooding risk near estuaries

- <https://www.sciencedaily.com/releases/2019/05/190506093605.htm>

Understanding what drives ocean currents between surf zones & continental shelves

- <https://eos.org/project-updates/untangling-a-web-of-interactions-where-surf-meets-coastal-ocean>

SANDAG Coastal Rail Trail opens in Encinitas, California – bike & walk

- <https://www.thecoastnews.com/encinitas-celebrates-opening-of-cardiff-coastal-rail-trail-with-bike-and-walk/>

New \$6.8B “Mina Rashid” will be Rivera-style coastal destination in Dubai

- <https://blooploop.com/news/emaar-mina-rashid-dubai-coastal-destination-museum-theatre-attractions/>

Despite two major storms, coastal residents in St Johns County rebuild – seawalls proliferate

- <https://www.firstcoastnews.com/article/news/local/folly-or-fearlessness-after-two-major-storms-st-johns-county-coastal-residents-rebuild-their-castles-in-the-sand/77-9f4bfda3-fd71-45de-9e51-a1d9397f6b76>

Maui Reefs provide estimated \$376M in coastal flood protection

- <https://mauiNOW.com/2019/05/03/maui-reefs-provide-376-million-worth-of-coastal-flood-protection/>

North Carolina Ports Authority gives approval to expansion of Wilmington Port despite objections

- <https://www.coastalreview.org/2019/05/despite-objections-crc-oks-port-expansion/>

How to solve crowding & sprawl in coastal cities?? Build floating sea suburbs?

- <https://qz.com/1610991/crowded-coastal-cities-consider-building-floating-suburbs-at-sea/>
- <https://www.hakaimagazine.com/news/singapore-wants-to-build-massive-floating-suburbs/>

Turkey installs \$500M Coastal Radar Surveillance System to detect & prevent illegal immigration, smuggling & unauthorized fisheries

- <https://www.trtworld.com/turkey/turkey-installs-multimillion-dollar-coastal-surveillance-system-26445>

4 resilience projects launched by New Hampshire Dept of Environmental Services Coastal Program

- <https://www.nhbr.com/four-nh-projects-aim-to-address-sea-level-rise/>

Perspective: How to prepare for 2019 Atlantic Hurricane Season

- https://www.godanriver.com/opinion/letters_to_editor/stern-tierney-prepare-now-for-hurricane-season/article_eb3d82da-70ff-11e9-a5c1-4f0845af9c6c.html

Multi-ethnic network of towns on Coast of Oaxaca, Mexico, fight for water autonomy

- <https://nacla.org/news/2019/05/07/coast-oaxaca-afro-and-indigenous-tribes-fight-water-autonomy>

Is it subsidence or climate change that is reducing barrier island resilience in Virginia? Remember that barrier islands by nature are ephemeral

- <https://www.virginiamercury.com/blog-va/virginias-barrier-islands-normal-resilience-to-sea-level-rise-is-hurt-by-climate-change-vcu-researchers-find/>

Responses to coastal erosion

- <https://www.itv.com/news/2019-05-09/1bn-a-year-needed-for-flood-defences-as-climate-warms-environment-agency/>
- <https://www.itv.com/news/2019-05-09/how-is-the-world-dealing-with-coastal-erosion/>

Chemical spill in Houston Ship Channel result of barges & oil tanker collision

- <https://www.khou.com/article/news/local/coast-guard-tceq-respond-to-chemical-spill-at-houston-ship-channel/285-69e5a80a-8d3b-4405-b386-71ae5189d77f>

