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Published March 28, 2020, 4:04 PM

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Photos and videos showing Manila Bay's waters turned turquoise went viral, prompting some to believe it's the effect of the Luzon-wide quarantine.

So does that mean Manila Bay is finally clean?

The Marine Science Institute of University of the Philippines (UP-MSI) begs to differ.



(Photo courtesy of Jemah Rasul / MANILA BULLETIN)

Possible causes of discoloration

“Kung palatandaan ito na malinis na ang Manila Bay, bakit ito ay pansamantala lamang at nauulit kahit walang umiiral na enhanced community quarantine?” the research institute said.

(If this is an indication that Manila Bay is now clean, why is it only temporary and repeatedly occurring even without the enhanced community quarantine?)

UP-MSI noted that in March 2014, Manila Bay waters had the same turquoise color for two days.

The discoloration may be due to algal bloom or a manifestation that there might be pollutants discharged into its waters.

Thousands of microorganisms live in seawater, including phytoplankton. The type of growing phytoplankton or algal bloom depends on the season, temperature, and the waters' nutrients. Algal bloom can change the color of the waters.

Other types of phytoplankton are caused by harmful algal blooms (HABs) or red tide.

“Pero wala pang HABs na nagdulot ng turquoise na kulay sa tubig sa Manila Bay,” UP-MSI added. (No HABs have ever turned Manila Bay waters to turquoise.)

The research institute further explained that there is one group of phytoplankton that colors waters turquoise and they are called “coccolithophores.”

“Ayon sa pag-aaral, sila ay dumarami lamang sa mga dagat na may mababang nutrients at sa gitnang dagat na walang polusyon na dulot ng tao,” it said.

(According to a study, they only grow in oceans with low nutrients and in the middle of seas with no human-induced pollution.)

UP-MSI added that pollutants or chemicals like chlorine may have also caused the discoloration.

“Maaaring mula sa pestisidyo na ginagamit sa mga pananim at palay na nadadala sa mga ilog papunta ng Manila Bay,” UP-MSI said. (It may be from pesticides used in crops and rice that are carried along rivers to Manila Bay.)

Pollutants and chemicals possibly come from establishments nearby that have swimming pools or commercial aquariums, or from disinfectants like bleach used against the coronavirus.

Pollution hotspot

UP-MSI underscored that two to three weeks of enhanced community quarantine is not enough to suddenly cleanse Manila Bay because it is categorized as a pollution hotspot.

The institute added that rivers like Pasig, tributaries, estero (estuaries), canals, household wastes, industrial wastes, and land reclamation damage Manila Bay.

“May mga pamantayan at indicators para masabi na ang Manila Bay ay malinis na, at kailangan pa ng mas marami at patuloy na pag-aaral o research para maisakatuparan ang mga ito,” UP-MSI underscored. (There are standards and indicators to say that Manila Bay is clean, and more research is needed to prove this).

Fisherfolk groups raise concern over Manila Bay discoloration

Fisherfolk group Pambansang Lakas ng Kilusang Mamamalakaya ng Pilipinas (PAMALAKAYA) urge the Department of Environment and Natural Resources to probe the discoloration of the Manila Bay waters.

“The [DENR] should get to the bottom of this. In case, on whatever establishment or entity responsible for a possible pollution discharge should be held accountable over violation of the government's very own rehabilitation drive of Manila Bay,” PAMALAKAYA said in a statement.

The group ruled out the possibility that it was algal bloom, as the water was clear and did not show any indication of algae.

“The color of the water can be likened to a swimming pool that underwent chlorination; thus, we can't set aside a possibility that some establishment carried out tank cleaning and outrightly discharged the toxic cleaning chemicals into Manila Bay,” it added.

Oceana, an international nonprofit ocean conservation organization, also urged DENR and the Department of Agriculture (DAR), and the Bureau of Fisheries and Aquatic Resources (BFAR) to further investigate.

“The development requires immediate study and continuous monitoring by experts on the water and its impact on the fisheries resources and marine environment of Manila Bay,” said Gloria Estenzo Ramos, vice president for Oceana in the Philippines.

Meanwhile, GMA also reported that the waters along Manila Bay are “inconsistent.” Water along Roxas Boulevard showed “a blacking and muddy color,” while the part of the bay behind the Cultural Center of the Philippines has a “bluish tint and moss green” color.

<https://news.mb.com.ph/2020/03/28/algal-bloom-pollutants-possible-causes-for-manila-bay-discoloration/>