Difference Between Point Source and Nonpoint Source Pollution

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Key Difference – Point Source vs Nonpoint Source Pollution

Humans and other living organisms interact with the environment for their survival. Organisms interact with each other for different aspects. Air, water, and soil fulfill requirements of all living organisms. Ecosystems run with a proper balance between biological, physical and chemical components. However, due to anthropogenic activities and natural phenomena, the environment is contaminated with various substances. Pollution can be defined as the presence of a substance in air, water, or land which has adverse effects on living organisms and on the environment. There are three major types of pollution: air pollution, soil pollution, and water pollution. Sources of air, water and soil pollution should be identified in order to prevent or minimize pollution which can be a threat to public health and hygiene. Sources can be categorized into two groups named point sources and nonpoint sources. Point source pollution occurs from a single identifiable source or point. Nonpoint source pollution occurs due to various unidentifiable causes. The key difference between point source and nonpoint source pollution is that the source of point source pollution can be traced back whereas nonpoint source pollution cannot be traced back to a single specific source.

What is Point Source Pollution?

Point source pollution refers to the pollution which occurs due to a single identifiable source. This type of pollution remains localized to the point of pollution. Hence, it is easy to identify the source and take actions to prevent pollution. Point source pollution is concentrated near the place of origin. It can be small scale to large scale.
Some examples of point source pollution include sewage pipes releasing sewage into water ways, chimneys of factories, oil spills, pipes leaking chemicals to rivers, etc. This type of pollution can happen accidentally or as a result of deliberate actions. Since the source is single and identifiable, small community actions are enough to prevent point source pollution.

**What is Nonpoint Source Pollution?**

Nonpoint source pollution refers to a pollution where the source of the pollution cannot be traced back to a single source. This type of pollution is widely diffused and diluted. The pollution is not concentrated into a particular location or area. Hence, it is difficult to identify the origin and take actions to minimize or prevent. Nonpoint source pollution is caused due to land runoff, rain, drainage, seepage, atmospheric deposition, hydrologic modification, etc. The result of the nonpoint source pollution can be seen in water bodies, earth, sea, etc. Nonpoint source pollution may occur due to many sources which are widely distributed or it can be spread due to movement of air and water. Hence, nonpoint pollution is often tracked global wise.
What is the difference between Point Source and Nonpoint Source Pollution?

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<td>Point source pollution is caused due to a specific source.</td>
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<td>Point source pollution is localized into the point of pollution.</td>
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Ease of Control

| Point source pollution is easy to control since the source is identifiable. | Nonpoint source pollution is not easy to control since the sources are unidentifiable. |

Level of Dilution

| Point source pollution is concentrated around the source of the pollution. | Nonpoint source pollution is more diluted than point source pollution. |

Preventive Actions

| Point source pollution can be stopped by taking actions within a single community. | Nonpoint source pollution is often tackled through global action. |

Summary – Point Source vs Nonpoint Source Pollution

Pollution is a serious issue in the world, which has a negative effect on animals, plants, and humans and lead to global problems such as climate change and global warming. Measures should be taken to prevent pollution and safeguard the public health, animal and plant lives and the environment. In order to minimize pollution, sources of the pollution should be traced out. Point sources and nonpoint sources of pollution are two types. Point source pollution is a result of a single source or identifiable source and it is easy to identify the source and prevent pollution. Nonpoint source pollution has several different unidentifiable sources, so it is difficult to trace back the sources into a single source and prevent pollution. This is the difference between point source and nonpoint source pollution.

Reference:


Image Courtesy:

1. “Non-point Source Pollution in Florida” by NOAA’s National Ocean Service (CC BY 2.0) via Flickr