

[Source](#)

22) Trace metals like cadmium or copper are essential for ocean productivity. **Studying the interactions of trace metals and marine plant and animal life help to**

1. Understand the nutrient cycling and productivity of the oceans
2. Track the movement of water masses responsible for ocean circulation
3. Study the biological, geochemical and ecosystem processes and food web analyses in the oceans.

Select the correct answer code:

- a) 1, 2
- b) 1, 3
- c) 1, 2, 3
- d) 2, 3

Solution: c)

What is the objective of studying the interactions of trace metals and marine plant and animal life?

- Trace metals like cadmium or copper are supplied to oceans via continental run-offs, atmospheric deposition, hydrothermal activities and continental shelf interaction.
- They are essential for ocean productivity. Scientists say that it is important to understand the interactions of trace metals with marine biota “for having a holistic understanding about nutrient cycling and productivity of the oceans”.
- Apart from their reactions on marine life, isotopic forms of trace metals can be utilised to track the movement of water masses responsible for ocean circulation and as tools to study the biological, geochemical and ecosystem processes and food web analyses.

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23) Consider the following statements regarding Seabuckthorn.

1. It is a shrub which produces an orange-yellow coloured edible berry.
2. In India, it is found in the Himalayan region, generally in dry areas such as the cold deserts of Ladakh and Spiti.
3. It is a soil-binding plant which prevents soil-erosion, checks siltation in rivers and helps preserve floral biodiversity.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

The Himachal Pradesh government has decided to start planting seabuckthorn in the cold desert areas of the state.

What is seabuckthorn?

It's a shrub which produces an orange-yellow coloured edible berry. In India, it is **found above the tree line in the Himalayan region, generally in dry areas such as the cold deserts of Ladakh and Spiti.** In Himachal Pradesh, it is locally called chharma and grows in the wild in Lahaul and Spiti and parts of Kinnaur.

As a folk medicine, seabuckthorn has been widely used for treating stomach, heart and skin problems. In the last few decades, scientific research worldwide has backed many of its traditional uses. “Its fruit and leaves are rich in vitamins, carotenoids and omega fatty acids, among other substances, and it can help troops in acclimatising to high-altitude