

Guarango

Guía de trabajo

Objetivo: como una especie invasiva puede ser uno de los mas importantes en la reforestación

Mochila de recursos: Argumentos

Tiempo: 30 minutos.

Instrucciones: En un párrafo de 250 palabras responde la pregunta ¿ como el guarango puede ser una especie invasiva pero al mismo tiempo es fundamental para la reforestación? ¿ cómo ayuda a nuestro ecosistema?

Cada idea apuntada debe estar acompañada de una explicación con base científica.

Instrucciones para el docente: El siguiente material servirá para dar una guía a los estudiantes acerca de los aspectos más importantes relacionados con el concepto que se trabaja en esta guía.

Especie Invasora

Las **especies invasoras** son **animales**, **plantas** u otros **organismos** que se desarrollan fuera de su **área de distribución** natural, en hábitats que no le son propios o con una abundancia inusual, produciendo alteraciones en la riqueza y diversidad de los ecosistemas. Cuando son transportados e **introducidos por el ser humano** en lugares fuera de su **área de distribución** natural, consiguiendo establecerse y dispersarse en la nueva región se les denomina **especies exóticas invasoras** resultando normalmente muy dañinas.

Que una especie invasora resulta dañina, significa que produce cambios importantes en la composición, la estructura o los procesos de los **ecosistemas** naturales o seminaturales, poniendo en peligro la **diversidad biológica** nativa (en diversidad de **especies**, diversidad dentro de las **poblaciones** o diversidad de ecosistemas). Debido a sus impactos en los ecosistemas donde han sido introducidas tales especies son consideradas **ingenieros de ecosistemas**.

Los cambios naturales o causados por los seres humanos en los ecosistemas de todo el planeta han redistribuido las especies vegetales y animales de forma accidental o voluntaria. Como consecuencia de estos cambios ciertas especies tienen un comportamiento invasivo en su localidad natural o de introducción, siendo más susceptibles los **hábitats** alterados o degradados. Estas invasiones llevan asociadas varios problemas:

- A nivel ecológico destaca la pérdida de diversidad autóctona y la degradación de los hábitats invadidos.
- Económicamente son importantes los efectos directos sobre las actividades agropecuarias y la salud pública.

Una vez detectada la invasión, su control y erradicación son costosos y no siempre posibles. Identificar los invasores potenciales y evitar su establecimiento es el mejor camino para frenar un problema que incrementa al mismo ritmo que la globalización.

(Extraído de: https://es.wikipedia.org/wiki/Especie_invasora)

Espceies reforestantes

La importancia de la reforestación se explica por el papel que desempeñan los árboles en nuestro planeta. Los nuevos bosques ayudan a prevenir la erosión del suelo o la desertificación y son importantes para proteger los edificios y campos del viento. Los árboles a lo largo de las riberas de los ríos o las costas fortifican y estabilizan la zona. Los bosques son hábitats naturales para especies únicas, que en algunos casos no pueden desarrollarse en ningún otro lugar. Por eso es importante la reforestación no sólo para regenerar las zonas degradadas o destruidas, también para rejuvenecer la cubierta arbórea. La reforestación de árboles se aplica para restaurar los bosques destruidos tras desastres naturales como incendios, inundaciones, terremotos, etc. También se utiliza la reforestación de bosques en lugares que han estado sujetos a intervenciones artificiales como minería, arqueología o construcción. Por tanto, la reforestación es un método eficaz para hacer frente a la deforestación y mejorar la situación ecológica.

(extraido de:<https://eos.com/es/blog/reforestacion/>)

Guarango

Work guide

Objective: as an invasive species it can be one of the most important in reforestation

Resource Backpack: Arguments

Time: 30 minutes.

Instructions: In a paragraph of 250 words, answer the question: how can the guarango be an invasive species but at the same time is it essential for reforestation? How does it help our ecosystem?

Each pointed idea must be accompanied by a scientifically based explanation.

Instructions for the teacher: The following material will serve to guide students about the most important aspects related to the concept that is worked on in this guide.

Invasive species

Invasive species are animals, plants or other organisms that develop outside their natural distribution area, in habitats that are not their own or with unusual abundance, causing alterations in the richness and diversity of ecosystems. When they are transported and introduced by humans in places outside their natural distribution area, managing to establish themselves and disperse in the new region, they are called invasive alien species, which are usually very harmful.

That an invasive species is harmful means that it produces significant changes in the composition, structure, or processes of natural or semi-natural ecosystems, endangering native biological diversity (species diversity, diversity within populations, or diversity of ecosystems). Due to their impacts on the ecosystems where they have been introduced, such species are considered ecosystem engineers.

Natural or human-caused changes in ecosystems around the planet have accidentally or voluntarily redistributed plant and animal species. As a consequence of these changes, certain

species have an invasive behavior in their natural or introduced locality, being altered or degraded habitats more susceptible. These invasions are associated with several problems:

At an ecological level, the loss of autochthonous diversity and the degradation of invaded habitats stand out.

Economically, the direct effects on agricultural activities and public health are important.

Once the invasion is detected, its control and eradication are expensive and not always possible. Identifying potential invaders and preventing their establishment is the best way to curb a problem that is increasing at the same rate as globalization.

(Extracted from: https://es.wikipedia.org/wiki/Especie_invasiva)

reforesting species

The importance of reforestation is explained by the role that trees play on our planet. New forests help prevent soil erosion or desertification and are important in protecting buildings and fields from the wind. Trees along river banks or shorelines fortify and stabilize the area. Forests are natural habitats for unique species, which in some cases cannot thrive anywhere else. That is why reforestation is important not only to regenerate degraded or destroyed areas, but also to rejuvenate the tree cover. Tree reforestation is applied to restore forests destroyed after natural disasters such as fires, floods, earthquakes, etc. The reforestation of forests is also used in places that have been subject to artificial interventions such as mining, archeology or construction. Therefore, reforestation is an effective method to deal with deforestation and improve the ecological situation.

(extracted from: <https://eos.com/es/blog/reforestation/>)

Black Locust

Work guide

Objective: To identify the meaning of invasive species and its effect on ecosystems.

Resource Backpack: Brainstorming

Time: 20 minutes.

Instructions: Get together with your core working group and collect everyone's ideas about what an invasive species is, and the effect it has on ecosystems.

Each idea noted must be accompanied by a scientifically based explanation.

Once the task is finished, present it to the class.

Instructions for the teacher: The following material will serve to guide students about the most important aspects related to the concept that is worked on in this guide.

Invasive species

Invasive species are animals, plants or other organisms that develop outside their natural distribution area, in habitats that are not their own or with unusual abundance, producing alterations in the richness and diversity of ecosystems. When they are transported and introduced by humans to places outside their natural distribution area, managing to settle and disperse in the new region, they are called invasive alien species, which are normally very harmful.

That an invasive species is harmful, means that it produces important changes in the composition, structure or processes of natural or semi-natural ecosystems, endangering native biological diversity (in species diversity, diversity within populations or diversity of ecosystems). Due to their impacts on the ecosystems where they have been introduced, such species are considered ecosystem engineers.

Natural or human-caused changes in ecosystems across the globe have accidentally or intentionally redistributed plant and animal species. As a consequence of these changes, certain species behave invasively in their natural or introduced location, with altered or

degraded habitats being more susceptible. These invasions are associated with several problems:

- At an ecological level, the loss of native diversity and the degradation of invaded habitats stand out.
- Economically, the direct effects on agricultural activities and public health are important.

Once the invasion is detected, its control and eradication are costly and not always possible. Identifying potential invaders and preventing their establishment is the best way to stop a problem that is increasing at the same rate as globalization.

(Extraído de: https://es.wikipedia.org/wiki/Especie_invasora)



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