

Plastic Pollution Policy Country Profile: Costa Rica

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Key Takeaways*

- Costa Rica produced over 10,000 metric tons of mismanaged plastic waste (MPW) in 2015, an annual waste generation figure that is projected to double by 2060 with no interventions.
- Costa Rica exported much of its plastic waste into China before it banned imports in 2018. Now, plastic waste is piling up in the country
- In 2017, the Costa Rican National Strategy to Phase Out Single-Use Plastic was launched, aiming to have single-use plastics phased out by 2021. Since then, at least four additional laws, plans, or directives have been issued targeting single-use plastics using bans and information-based instruments
- Effectiveness data on the implementation of strategy was not found during the writing of this publication

* These are based on a review of literature published and policies enacted before December 2021

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INTRODUCTION

This document outlines: 1) the nature of the plastic pollution problem in Costa Rica, 2) available information about the national, subnational, and to a smaller extent, international policy landscape guiding government approaches to the plastic pollution problem in Costa Rica, and 3) what, if any, information exists about the effectiveness of these policy approaches. This document is written using a basic literature review process and with support from the [Plastics Policy Inventory](#), as outlined in the Appendix (below), and is not exhaustive. It contains the most up-to-date information at time of publication, but this information may eventually be less relevant as the policy landscape continues to evolve. The authors were not able to get expert review for this case study, to ensure the information gathered aligns closely with what experts and practitioners are observing and experiencing on the ground. If conducting research on the plastic pollution crisis in Costa Rica, we recommend you use this document as one of many resources available to better understand the problem and its solutions.

PLASTIC POLLUTION IN COSTA RICA

Plastic pollution poses a threat both to humans and the environment of Costa Rica (Neeld et al. 2018). Several industries, including fisheries and tourism, are threatened by improper disposal of plastics. Of the nearly US\$60 billion GDP that Costa Rica generates, around 1.4% of this comes from fishing (Global Marine Commodities), and 5% comes from tourism (OECD 2020). In primary and secondary markets, the two industries collectively employ close to 200,000 Costa Ricans (OECD 2020). Estimates of future plastic waste indicate that these industries will continue to be threatened by further increases in plastic waste mismanagement (Lebreton and Andrady 2019), leading to an overall decline in the general welfare of Costa Rica (Neeld et al. 2018).

The Lebreton and Andrady (2019) seminal study projects scenarios of mismanaged plastic waste based on country-level data on population and waste management and distribution, clarifying the extent of current and future plastic pollution problems in each country, including Costa Rica. The study estimates that, in 2015 alone, Costa Rica generated nearly 10 million kilograms (10,000 metric tons) of mismanaged plastic waste (MPW). With no additional interventions, MPW is expected to reach 16 million kilograms (16,000 metric tons) by 2040 and nearly double to almost 20 million kilograms (20,000 metric tons) by 2060.

To better understand plastic pollution in Costa Rica, it is also important to note the circulation of plastics through both imports and exports. In 2016, US\$1.4 billion in imports and US\$597 million in exports of plastics and rubber crossed Costa Rica's borders, according to World Bank estimates (Neeld et al. 2018). Further, Costa Rica's plastic pollution problem was exacerbated when China—where Costa Rica exported US\$1.37 million in plastic and rubber waste in 2016 alone—closed its borders to plastic waste began to pile up at the beginning of 2018 (Neeld et al. 2018). As a result of the border closure decision, plastic waste quickly began to build up in Costa Rica, threatening to spill over into marine ecosystems. This crisis catalyzed Costa Rica to pass legislation and develop a campaign that would eliminate single-use plastics in most municipalities and businesses by 2021 (Neeld et al. 2018).

Most of the waste generated in Costa Rica is dumped into four main landfills (Center for Clean Air Policy 2013). The government's efforts to effectively manage solid waste originally focused on landfill disposal. However, these efforts have been insufficient to properly manage plastic waste, resulting in plastic waste reaching both landfills and marine ecosystems (Neeld et al. 2018). Moreover, recycling programs in Costa Rica were found to be undesirable and inconvenient to consumers because of the need to pre-sort recyclable materials at home, stemming from a lack of proper facilities to collect and sort the volume of waste that was generated in Costa Rica. Currently, most of the fees for solid waste management fund only landfill disposal, meaning fewer funds are available for other solid waste management efforts that may be more effective in combatting plastic pollution.

COSTA RICAN LEGISLATION TO ADDRESS PLASTIC POLLUTION

The government of Costa Rica has been working to address the problem of plastic pollution on the national level, with initial legislation and a national strategy introduced in 2017. The national strategy has been implemented through laws, as well as administrative agency action.

Ley para la Gestión Integral de Residuos (2010)

Costa Rica's government first attempted to manage waste with the Ley para la Gestión Integral de Residuos in 2010 ("Law for Comprehensive Waste Management"). This law contained general guidelines for improving waste management in the country and called for the need to pass more decrees that target specific aspects of waste management. In 2011, the Ministry of Health began setting regulations regarding waste as part of the implementation of the Ley para la Gestión Integral de Residuos (2010). The proposed regulations target Extended Producer Responsibility (EPR), requiring broadly defined "waste producers" to develop, implement, and follow waste management and collection programs (UNEP 2021).

Costa Rican National Strategy to Phase Out Single-Use Plastic

In 2017, the government launched a national initiative to phase out single-use plastic by 2021. This ban targets all forms of single-use plastic, including bags, bottles, cutlery, straws, and Styrofoam, among others (UNEP 2018c). Most of the following laws and directives are components and results of this National Strategy.

Regula el uso, consumo y etiquetado del plástico de un solo uso (2018)

The government's Executive Branch advanced regulation of single-use plastic through Directive No. 0-14 MINAE in 2018 ("Regulates the use, consumption and labeling of single-use plastic"). This charged the Ministry of Economy, Industry and Commerce and the Ministry of Health to fully prepare the technical regulations for the classification of single-use plastics. This initiative was intended to better inform consumers on the environmental footprint that their purchases and habits create. Materials that comply with the newly adopted classification tool, known as Renewable, Compostable, and Compostable in Marine Environments (RCM) are given a rating of 1, and those that do not comply with the standard are given a 0 (The Tico Times 2018). This sets a standard for consumers to know what is and what is not acceptable to purchase. The regulation directs that all single-use plastic products carry this label, but it is unclear if this has been implemented at the time of writing.

The directive also targets the two Ministries, along with the Ministry of Public Education, to implement campaigns (examples of older campaigns in Figure 1, below) to make the public more aware of the movement to replace all single-use plastics with renewable and compostable alternatives. Many of these campaigns are targeted directly at students enrolled in Costa Rica's public schools.

Figure 1. Example of Plastics Policy Curriculum (Vilela de Araujo et al. 2005)

Participación

Introducción

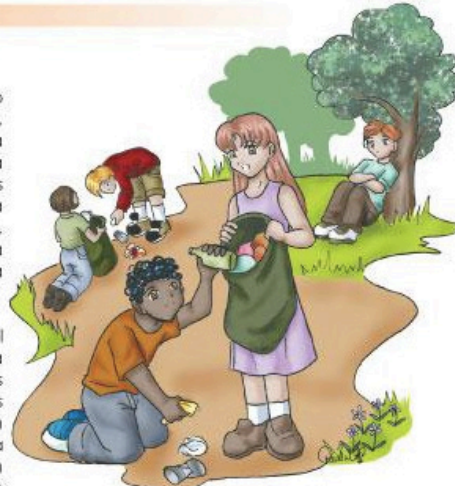
La participación es muy importante no sólo para elegir el presidente de un país, de una asociación o de la junta directiva de la clase, sino también para contribuir a mejorar las cosas. Al participar en la selección de políticos, puedes ayudar para que nuestro país tenga buenos líderes.

La participación es a la vez un derecho y un deber de todos y todas.



Los países en donde el pueblo puede escoger a sus líderes son llamados democracias: Costa Rica es una de ellas. Participación también significa unirse a una conversación o a una reunión para influir en las decisiones que se estén tomando.

No obstante, muchos ciudadanos no participan en procesos electorales, proyectos comunales y estudiantiles que buscan mejorar el entorno.



¿Qué te muestra esta ilustración?
¿Todos participaron?



Rechazar

Consiste en no adquirir productos, ya sea por los materiales utilizados en su producción, por su empaque o por el grado de contaminación que produce una vez desechados (como baterías, vajillas desechables o envases plásticos)



Reciclar

Cuando los desechos sólidos se clasifican, adquieren valor, pues al separarlos y enviarlos al centro de acopio, se pueden vender a las empresas encargadas de procesar latas, plástico, papel y vidrio.



Reducir

comprar lo estrictamente lo necesario. También debemos reducir el gasto energético y el gasto de agua.



Reutilizar

Implica el uso de envases retornables o reutilizables, donar ropa, juguetes e implementos de cocina que ya no se usan, al igual que libros y revistas.

The Directive instructs the National Environmental Council to fully articulate the goals, deadlines, and measures of success for this guideline to gauge progress and fulfillment. The same council, in coordination with the Ministry of Environment and Energy, is tasked with summarizing the actions carried out in compliance of this Directive by providing quarterly executive reports. This monitoring, however, is not readily available to the public yet.

[Ley para combatir la contaminación por plástico y proteger el ambiente \(2019\)](#)

A critical step in fulfilling the National Strategy of eliminating single-use plastic was completed when the Legislative Assembly of Costa Rica decreed a law targeting plastic in 2019. This law, *Ley para combatir la contaminación por plástico y proteger el ambiente (2019)* (Law to combat plastic pollution and protect the environment), bans the sale or distribution of plastic bags, bottles, and straws. The Ministry of Health, however, is authorized to grant exemptions. Alternatives such as biodegradable and reusable bags—which can be plastic, just not single-use—must be certified as having a low impact on the environment to ensure that their eventual disposal will not pose any major environmental ramifications. The law recommends that businesses incentivize shoppers to bring their own packaging to carry their purchases.

In addition, the law requires that importers, producers, sellers, and distributors of single-use plastic water bottles comply with at least one of the following restrictions: (a) regulate the amount of recycled resin within the composition of the bottle, (b) establish a program for waste recovery methods, (c) participate in waste management programs, (d) minimize waste generation through the development or use of more environmentally friendly products or facilitate recovery through less harmful waste disposal methods, or (e) improve the collection and management of waste by partnering with at least one municipality in a strategic alliance.

Beyond the regulations of plastic bags, straws, and bottles, this law gives the Development Banking System the authorization to generate research programs for innovation and financing to small companies that seek to address and reverse plastic pollution in Costa Rica. Government entities are also prohibited from buying single-use plastic items that are primarily used for food consumption. Finally, this law modifies the Costa Rican education curriculum to include information instruments on plastic waste and management.

The law was originally adopted by the main legislative body of Costa Rica. The law charges the Ministry of Health with all oversight and compliance regulation of the provisions. The statute directs the Ministry to produce a yearly evaluation report that documents the reduction of single-use plastic pollution throughout Costa Rica. To date, there are no readily available, public monitoring reports on the pollution reduction in Costa Rica.

[Ley para la prohibición del poliestireno expandido, reforma Ley para la Gestión Integral de Residuos \(2019\)](#)

This law (No. 9703) (“Law for the prohibition of expanded polystyrene, reform of the Law for Comprehensive Waste Management”) prohibits the importation, commercialization, and delivery of polystyrene (Styrofoam) containers in commercial settings in favor of more environmentally friendly alternatives. The Development Banking System is authorized to grant credit to industries that look to develop these alternatives. The law gives the Ministry of Health the duty to include a national plan that encourages polystyrene packaging to be replaced with alternatives. The only noted exceptions are (1) in the case that using alternative materials is not environmentally viable, (2) the packaging of household appliances, and (3) in industrial uses. The plan by the Ministry must also include education and awareness components to inform the industries and consumers. Violations of this law are constituted as minor crimes once it goes into effect in July 2021. As of early 2021, researchers were unable to find a publicly available version of this plan from the Ministry of Health.

[SINAC-DE-944-2020 Directive \(2021\)](#)

The Ministry of Environment and Energy issued this directive that prohibits the consumption, use, and entry of single-use plastics in Protected Wild Areas of the National System of Conservation Area (SINAC) (Mora 2020). It applies in general to all users who enter the protected areas, including, but not limited to visitors, researchers,

service providers, and officials. It also directs that the Protected Areas strengthen their waste management actions. The SINAC only applies to single-use plastic items and does not obviously contain an accountability measure to ensure the Protected Areas are implementing these plans. But it manages enforcement by warning users of the directive and confiscation of single-use plastics if necessary.

Northeast Pacific Marine Litter Action Plan

Costa Rica, along with seven neighboring nations that constitute the Northeast Pacific subregion, is currently developing an action plan that proposes appropriate actions at municipal, national, and regional levels to combat marine litter over time while stimulating economic growth, social development, and local prosperity (UNEP 2021). It has yet to be fully developed and released at the time of this publication, but this plan has potential to be a strong intergovernmental approach to combatting plastic pollution, especially in marine environments (UNEP 2021). Likewise, it can complement already existing Regional Sea's Marine Litter Plans in the Mediterranean, Wider Caribbean Region, Baltic Sea, Northwest Pacific, Southeast Pacific, East Asians Seas Region, as well as several national and subnational action plans.

POLICY EFFECTIVENESS

While Costa Rica was among the first countries to pledge to be fully single-use plastic free by 2021, there is little to no data on the effectiveness of this campaign. Significant efforts were made to fulfill this promise with the introduction of the policies noted above, but the implementation of the policies is unclear.

Many of the policies have components that did not take full effect until the end of 2021, such as Law No. 9703 (2019) on the prohibition of polystyrene in commercial settings. This law did not actually take effect until August 7, 2021, 24 months after it was introduced. However, this is not the case for all the policies and plans. For example, *Ley para combatir la contaminación por plástico y proteger el ambiente* (2019) charges the Ministry of Health with generating and publicizing a report on the reduction in use of single-use plastics for Costa Rica, apparently effective immediately. Our researchers were unable to gather any information on data on effectiveness from the Ministry of Health nor any outside research groups.

While reports and legislative and regulatory activity suggest that the government of Costa Rica is making a concerted effort to reduce and eventually eliminate single-use plastics, the lack of data means it is currently not possible to track progress and evaluate the effectiveness of the policies.

CONCLUSION

Costa Rica's plastic waste management capacity is challenged by China's ban on plastic waste from other countries, issues with pre-sorting waste, and the demand for pristine marine environments from tourism and fisheries. With limited effectiveness data available to the public, the impact of current policies in reducing plastic production, waste, and leakage into the environment is not fully understood.

REFERENCES

- Center for Clean Air Policy. 2013. Costa Rica-Ordinary Solid Waste NAMA. http://ccap.org/assets/Costa%20Rica_Waste_May_2013_NAMA_Executive_Summary.pdf
- Global Marine Commodities. 2021. Costa Rica. <https://globalmarinecommodities.org/en/costa-rica/>.
- Lebreton, L., and A. Andrady. 2019. "Future Scenarios of Global Plastic Waste Generation and Disposal." *Palgrave Communications* 5(1): 1-11.
- Ley para combatir la contaminación por plástico y proteger el ambiente, No. 9786. 2019. http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=90187.
- Ley para la Gestión Integral de Residuos, No. 8839. 2010. <http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/>

[nrm_texto_completo.aspx?nValor1=1&nValor2=68300](#).

- Ley para la prohibición del poliestireno expandido, reforma Ley para la Gestión Integral de Residuos, No. 9703. 2019. http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=89355.
- Mora, P.A. 2020. A partir de febrero será prohibido ingresar a parques nacionales con plásticos de un solo uso. Delfino. <https://delfino.cr/2020/08/a-partir-de-febrero-sera-prohibido-ingresar-a-parques-nacionales-con-plasticos-de-un-solo-uso>.
- Neeld, C.J., N. Bell, S.J. Ring, and S.A. Napoli. 2018. *Analyzing the Implications of a Green Tax on Single-Use Waste Plastics in Costa Rica*. San José: Worcester Polytechnic Institute.
- OECD iLibrary. 2020. Costa Rica. <https://www.oecd-ilibrary.org/sites/37bb0cf5-en/index.html?itemId=/content/component/37bb0cf5-en#chapter-d1e114026>.
- Pilar, J.C. 2018. "Costa Rica's Plastic Invasion." *The Tico Times*, June. <https://ticotimes.net/2018/06/05/costa-ricas-plastic-invasion>.
- Prohibición que los Órganos del Ministerio de Ambiente y Energía y sus Proveedurías Institucionales Adquieran Productos de Plástico de un Solo Uso "Desechables" para el Consumo de Alimentos, No. 1. 2017. http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=83490&nValor3=107327&strTipM=TC.
- Regula el Uso, Consumo y Etiquetado del Plástico de un Solo Uso, No. 014-MINAE. 2018. http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=86907&nValor3=112990¶m2=1&strTipM=TC&lResultado=1&strSim=simp.
- UNCTAD. 2019. Overview of Economic and Trade Aspects of Fisheries and Seafood Sectors in Costa Rica. https://unctad.org/system/files/official-document/ditctedinf2019d13_en.pdf.
- UNEP. 2018. Single-Use Plastics, a Roadmap for Sustainability. <https://www.unep.org/ietc/resources/publication/single-use-plastics-roadmap-sustainability>.
- UNEP. 2021. Policies, Regulations and Strategies in Latin America and the Caribbean to Prevent Marine Litter and Plastic Waste. https://wedocs.unep.org/bitstream/handle/20.500.11822/34931/Marine_EN.pdf?sequence=1&isAllowed=y.
- Vilela de Araujo, M., E.R. Ramírez, L.H. Rojas, and C.B. Lobo. 2005. Aprendamos sobre un estilo de vida sostenible con la carta de la tierra. Ministerio de Educación Pública. <https://www.mep.go.cr/sites/default/files/aprendamos-sobre-estilo-vida-sostenible.pdf>.

APPENDIX – METHODS

To begin the search for policy documents, researchers referenced the Nicholas Institute's Plastics Policy Inventory for any relevant national or subnational policies in Costa Rica. At the time this case study was initially drafted, there were no policies from Costa Rica in the Inventory.

Researchers then searched for academic and grey literature relating to plastic pollution and relevant policies in Costa Rica. This search was mostly done through Google Scholar. Search terms included, but were not limited to, “Costa Rica plastic,” “Costa Rica plastic pollution,” “Costa Rica plastic pollution policies,” “Costa Rica plastic bag ban,” “Costa Rica single-use plastic,” and “Costa Rica plastic use.” Sixteen total articles were found, and all were screened for inclusion. The inclusion criteria were that the articles described the plastic pollution problem in Costa Rica, described relevant policies in Costa Rica, or they described the effectiveness of relevant policies. They were then read through and relevant information that could aid this case study was extracted. When citations referenced additional literature that seemed relevant, those papers were subsequently screened for inclusion as well. This is the primary method in which the background information was collected.

Much of this scholarly literature referenced specific national and subnational Costa Rican policies. To find the policy documents that were not originally in the Plastics Policy Inventory, the policy names found in the literature were either entered in a Google search or searched for in the Sistema Costarricense de Información Jurídica (Costa Rican Legal Information System). This is how the specific language of the policy documents was discovered and analyzed. The policies which demonstrated an intent on behalf of policy makers to address plastic pollution were then entered into the Plastics Policy Inventory.

Once the secondary literature had been exhausted for relevant policies, researchers then moved the search to InforMEA and ECOLEX to see if any more policies could be found that were not referenced in the literature. No new policies were discovered in this round of the search.

Finally, to check if any new policies had been agreed upon or enacted since the publication of the literature referenced above, the same search strings that were used to find the literature were applied in a normal Google search. Here, researchers were looking for recent news articles referencing policies that may have been implemented and not yet included in any literature. Nothing new was discovered, however these news articles did provide a more in-depth understanding of the plastic pollution issue in Costa Rica from a primary point of view. As a result, tertiary sources were added to the background information section.

To better understand the effectiveness of the policies and to contextualize them in the grand scheme of the Costa Rica Government, the websites of the Ministries of Health, Environment and Energy, and Public Education were reviewed. As mentioned in the “Policy Effectiveness” section, there was no clear data on any reduction in use of single-use plastics.