TEXTO A

30 years ago the world pledged to fix the ozone layer. And it worked

By Alex Gray

Could the Montreal Protocol be the world's most successful treaty? In 1987, countries around the world came together to sign it. Their mission? To save the ozone layer. The Montreal Protocol marks its 30th anniversary on 16 September 2017, the UN's International Day for the Preservation of the Ozone Layer. The celebration is all the more special, because the treaty worked.

Health benefits

Thanks to the treaty, more than 135 billion tons of carbon dioxide-equivalent emissions were prevented from reaching the atmosphere between 1990 and 2010. It is estimated that up to 2 million cases of skin cancer worldwide may be prevented each year by 2030. The global health and economic benefits are expected to amount to US$2.2 trillion, as a result of averted damages to agriculture, fisheries and materials. Over 98% of ozone-depleting substances have been phased out globally to date. Without the treaty, the hole in the Antarctic ozone would have been 40% larger in 2013.

What is the ozone?

The Earth is surrounded by a layer of atmosphere that protects it from the sun's ultraviolet rays. These rays can cause skin cancer, create cataracts in our eyes and impair our immune systems; they also threaten plant growth and food chains.

A hole in one

In 1974, scientists discovered that the ozone layer was getting thinner. Then they found that the problem was probably caused by human activities. The atmospheric layer was being depleted by chemicals called chlorofluorocarbons (CFCs), which were at the time widely used in aerosol cans, fire retardants and fridges, among other things.

In particular, scientists saw that there were very large decreases in ozone concentrations over Antarctica. So much so, that it became known as the Antarctic Ozone Hole. In 1987, countries came together – eventually 197 in total – and agreed to stop using CFCs and similar ozone-depleting chemicals by signing the Montreal Protocol on Substances that Deplete the Ozone Layer. The protocol was agreed on 16 September 1987 and entered into force on 1 January 1989.

Progress so far

In 2016, scientists discovered that the agreement was working. The ozone layer was healing. Using a combination of measurements from satellites, ground-based instruments and weather balloons, a team of scientists found that since 2000 the hole has shrunk by 4 million square kilometres – an area bigger than India. Building on its success, the Protocol was amended last year. The Kigali Amendment added an agreement to phase out hydrofluorocarbons (HFCs). This group of chemicals replaced CFCs because they are ozone-safe. However, while they aren't directly responsible for depleting the ozone layer, they are powerful greenhouse gases. Although only comprising a small proportion of emissions, HFCs can be thousands of times more potent than carbon dioxide in contributing to climate change.

The Montreal Protocol could be the single largest real contribution the world has made so far towards keeping the global temperature rise "well below" 2 degrees Celsius. This is the target agreed at the Paris climate conference last year. At current estimates, the hole will close completely around the middle of this century.

Adaptado de: http:// www.weforum.org/agenda/2017/09/ozone-action-worked-environmental-progress

Acessado em 06/05/2017

TEXTO B

Abstract

Do not forget culture when implementing mental health interventions for violence survivors

Francisco Javier Bonilla-Escobar, Gisel Viviana Osorio-Cuellar, Sara Gabriela Pacichana-Quinayáz, Gabriela Sánchez-Rentería, Andrés Fandiño-Losada and Maria Isabel Gutiérre

Armed conflict has positioned Colombia as the country with the second highest internal displacement of citizens. This situation has forced government projects and international cooperation agencies to intervene to mitigate the impact of violence; however, the coping strategies implemented by the country's minorities are still unknown. The study objective is to describe the coping strategies and their relation with mental health within Afro-descendant culture in Colombia and the effects that armed conflict has on these coping mechanisms, through a phenomenological study involving focus groups and interviews with experts. Rituals and orality have a healing function that allow Afro-Colombian communities to express their pain and support each other, enabling them to cope with loss. Since the forced displacement, these traditions have been in jeopardy. Armed conflict prevents groups from mourning, generating a form of latent pain. Afro-Colombians require community interventions that create similar spaces for emotional support for the bereaved persons in the pre-conflict period. Thus, it is essential to understand the impact of this spiritual and ritualistic approach on mental health issues and the relevance of narrative and community interventions for survivors.

Key words: Coping behavior; African descendants; Mental health; Community intervention; Violence

Fonte: http://www.scielosp.org/scielo.php?script=sci_arttext&pid=S1413-81232017000903053&lang=pt

Acessado em 08/10/2017

TEXTO C

Nobel chemistry prize for molecule photos

The 2017 Nobel Prize in chemistry has gone to three scientists for their work on photographing molecules. Professors Jacques Dubochet, Joachim Frank and Richard Henderson will share the $1,090,000 prize. They developed a special way of taking photos of molecules. Molecules are the very smallest building blocks that make up the cells in our body. Everything and everyone is made of molecules. The three chemists developed a technique called cryo-electron microscopy (cryo-EM). This allows scientists to zoom in to amazing new levels. Scientists can now see things in our bodies that we have never seen before. They can see how the building blocks of life move.

The Nobel Prize committee said the new cryo-EM technique will change science forever. It said the technique has "moved biochemistry into a new era". The Nobel chairperson said: "Soon, there will be no more secrets. Now we can see the intricate details of the biomolecules in every corner of our cells and every drop of our body fluids. We can understand how they are built and how they act and how they work together in large communities. We are facing a revolution in biochemistry." Professor Frank said the practical uses for the technique were "immense". Cryo-EM will mean scientists can look at the building blocks of viruses. This means we will find cures for many diseases.

Adaptado de: http://www.newyorker.com/tech/elements/seeing-the-invisible-world-with-the-2017-nobel-prize-in-chemistry
Acessado em 05/10/2017

TEXTO A - QUESTÕES DISSERTIVAS

Responda as questões de 01 a 05 referentes ao TEXTO A em português.

1) Quais são os efeitos dos raios ultravioletas mencionados no texto?

_____

_____

_____

_____

2) O que os cientistas descobriram há um ano atrás?

_____

_____

_____

_____

3) Em relação à camada de ozônio, qual é a expectativa para o 2050?

_____

_____

_____

_____

4) Qual foi a principal ação tomada pelos países que assinaram o Protocolo de Montreal?

_____

_____

_____

_____

5) Qual era o objetivo do Protocolo de Montreal assinado em 1987?

_____

_____

_____

_____

TEXTO B - RESUMO

II - Escreva, em português, utilizando entre 90 e 100 palavras, o resumo do TEXTO B.

As informações referentes à fonte do texto não devem ser consideradas.

TEXTO C – QUESTÕES OBJETIVAS

III – Responda as questões de 01 a 04 referentes ao TEXTO C. Há apenas uma alternativa correta.

1) O pronome *this* (linha 07) refere-se a

a) zoom.
b) technique.
c) microscopy.
d) molecule.

2) Assinale a alternativa CORRETA segundo o texto.

a) Os vencedores receberam um prêmio de quase 1 milhão de dólares.
b) A descoberta poderá auxiliar na cura de muitas doenças.
c) O mundo está em evolução.
d) Agora os pesquisadores conseguem ver a maioria dos fluídos corporais.

3) De acordo com o Comitê do Prêmio Nobel, a nova técnica

a) poderá mudar a ciência para sempre.
b) mudaria a ciência paara sempre.
c) mudará a ciência para sempre.
d) mudará a ciência por uma era.

4) Considere verdadeiras V ou falsas F as seguintes afirmações e assinale a alternativa que apresenta a ordem correta de cima para baixo.

( ) O uso prático da nova técnica é muito grande.
( ) Tudo é feito de moléculas.
( ) A nova técnica depende de um microscópio.

a) V – V – F
b) F – V – F
c) F – F – F
d) V – F – F

GRADE DE RESPOSTAS

Questão	1	2	3	4
Resposta				

Respostas rasuradas serão desconsideradas.