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TURNING CLIMATE CHANGE INTO OPPORTUNITY

**CLIMATE
CHANGE**



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TURNING CLIMATE CHANGE



INTO AN OPPORTUNITY

By Divya Negi



Changes in the intensity and frequency of extreme events, rather than changes in mean circumstances, are often the most destructive effects of climate change. They show how climate extremes combine with local anthropogenic disturbances and mean climate trends to cause biodiversity loss, and they argue that all three of these causes of biodiversity loss must be addressed for effective conservation management. They highlight examples of key multi-trophic animal-mediated processes (seed dispersal by dung beetles, grazing by parrotfish) that aid ecosystem recovery in tropical forests and coral reefs, highlighting examples of key multi-trophic animal-mediated processes (seed dispersal by dung beetles, grazing by parrotfish).

The following are the main opportunities climate change bring into place

- * new jobs and 'green' jobs
- * increased competitiveness
- * economic growth
- * cleaner air and more efficient city public transportation systems
- * innovative technology such as electric or plug-in hybrid cars, energy-efficient homes or offices with sophisticated heating and cooling systems
- * reliable energy and other resource supplies – less reliant on imports

Companies all throughout the world are preparing for climate change by investing in more robust structures that can better survive storms, severe winds, and flooding. Developing countries may provide investment opportunities in new development and infrastructure projects designed to withstand extreme weather. Companies that help remodel existing buildings and fortify energy infrastructure for higher resilience can be included in investments in the United States.

The potential for investors are twofold: energy conservation within existing infrastructure in industrialized economies and resource efficiency integration in new commercial buildings in emerging countries. According to a recent assessment of the construction industry, over half of firms expect green building projects to account for more than 60% of their activity by 2020.



Invest in robust agriculture and water infrastructure, or carefully examine enterprises with activities in areas where food and water may be scarce, and avoid them if the risks are too large. Heat waves and droughts in the United States have a significant impact on agricultural productivity, particularly corn, wheat, soy, and cotton. Climate change is expected to reduce agricultural profitability for common crops by 30 percent by 2070 if they do not adapt.

Building a low-carbon, climate-friendly society and economy is a major task, but also a huge opportunity. Many of the required technologies already exist. The true issue is putting them into practice.

LEARNING FROM SEOUL'S WASTE MANAGEMENT SYSTEM

By Sahana Das

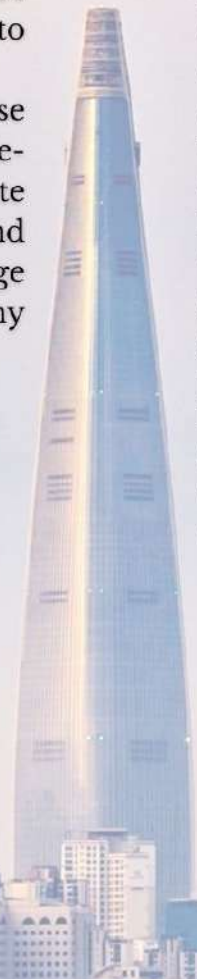
Among the many by-products of Urbanization, a problematic and pervasive one is waste – unending heaps of waste in cities across the world, thus challenging cities to come up with efficient ways of managing and disposing (safely) waste. Amongst the many great cities of the world with effective waste management programs, Seoul tops the list.

Seoul has a developed world class Solid Waste Management (SWM) system which employs a Volume-Based Waste Disposal Fees (VBWF) system, a deposit refund system, Extended Producer Responsibility (EPR), and bans on problematic plastic items and packaging since the 1990s which have contributed significantly to the reduction of waste.

From 1991 onwards, there was an increase in recyclable waste due to the state-mandated separation of household waste into food waste, recyclable material and the rest. This has helped Seoul to manage organic waste more effectively than any other metropolitan city on the planet.

In addition, the implementation of the Volume-Based Disposal Fees (VBWF) system which aims at providing free collection services by the state for recyclable waste while charging waste treatment costs on polluters according to the amount of waste has been largely successful. The VBWF system is at the core of Seoul's new waste management policies, which can be adopted by different governments around the world as the need for more effective waste management policies grow every single day, along with the demand to decrease our reliance on petrochemical products and disposables, such as the pervasive problem of plastic – which Seoul has discouraged with the help of local environmental groups that aim to phase out plastic products and disposables as whole.

Seoul sets an ideal example on how local-level governments and municipalities can work in conjunction with the Central government to combat the issue of waste generation through well thought out policies and effective implementation. But most importantly, the success of Seoul's waste management is brought by the cooperation of the people in the endeavour of keeping their city clean.



Solar Policy

FOR TAMIL NADU'S FARMERS

By Sahana Das

In an agriculture dominated economy like that of India, the production of agricultural commodities require not only water and natural resources but electricity as well. There is an interrelationship between electricity and the supply of irrigation facilities.

The relationship is tinged with complications as far as the practical scenario is concerned because the supply of electricity to the farmlands in our nation is either fully or partially subsidized.

However, to draw the relentless dependency away from this type of distorted system where the chain of the economy cannot rely upon leads to frequent and consistent deficits on the part of the Union and State governments. This further eliminates the scope of any investment in the agrarian sector, besides revised subsidies annually. There is still a hierarchy in the agriculture sector in India where the local landlords occupy the apex position and involve other money lenders, and on rare occasions the banking institutions. The realm has barely evolved since the eve of Independence because of the same reason. While the status quota in the economic domain can be blamed on political compulsions, in reality, the absence of any fixed plan of mass investment in the landed estates is the true evil.

The Solar policy focuses on reducing the dependency on the production constraints through a major vested domain of self-reliance, peddled with technological advancement in the rural scene where the mass scale training and education of workings of solar panels is the challenge. The enrollment of such an education programme, where investment is not disenfranchised but multi-layered (between the state and central government) has the potential to address & eradicate the issues relating to the supply of farming constraints whose supply is dependent on electricity.

The attention should be towards renewable sources of energy instead of non-renewables which are unsustainable and detrimental to the environment and this initiative will guide the implementation of solarisation of electricity in India for years while addressing the issues of the present.





STORIES OF CLIMATE HOPE

By Trisha Ravindranath

“

We can view climate change as representing a remarkable diversity of opportunities for human beings to give expression to their limitless potential.”

- Dr. Daisaku Ikeda

Today our Blue Planet grapples with Climate Change as a ‘Code Red for Humanity’, at the helm of tipping points. From the IPCC reports to seeing actual proof of the climate crisis before our eyes, humanity stands at a crossroad where it must tap into and bring forth its greatest resources - hope and resilience.

Here are stories of some climate heroes that inspire us to have the courage to rebuild a better world that has its roots in the dignity of life.

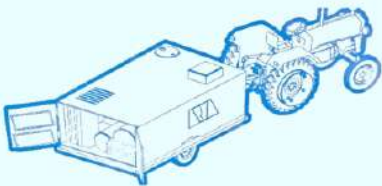


1) Takachar- Vidyut Mohan

With Agricultural waste increasing year after year, the only solution seen by farmers is to burn what they cannot sell. This action affects our health and the environment in unprecedented ways, polluting the air that we breathe. The foremost among them are residents of Delhi trapped by the smoke from the fields surrounding it.

Emerging from this very pollution is the solution: Takkachar, a social enterprise by Vidyut Mohan, an entrepreneur from Delhi. They are on a mission to fight climate change by transforming massive amounts of waste biomass into marketable products around the world”. This cheap and portable technology attaches to tractors and converts crop residues into sellable bio-products like fuel and fertilizer.

Scaling it could cut a billion tonnes of carbon dioxide a year! A win-win for Indian farmers and the environment.





2) WOTA BOX, Japan

Reports say that by 2050, 40% of the world's population will experience severe water stress owing to climate change and rapid population growth.

Keeping our hopes afloat, a Japanese start-up,

WOTA aims to “improve water security by helping people reuse wastewater.”

Their pioneer product, WOTA BOX, is the only solution of its kind, as it recycles 98 per cent of water waste into clean fresh water through its unique technology. It's portable, easy to use and fifty times more efficient than a water treatment plant.

More than 20,000 people in Japan have benefitted from it already by using WOTA BOX after disasters such as floods, typhoons and earthquakes.

This is an ideal example of value creation through adversity.



3) Solar-powered ironing cart -Vinisha Umashankar

Vinisha Umashankar, a 14-year-old from the state of Tamil Nadu inspires us through her innovation of a solar-powered ironing cart, which she made as a clean alternative to the charcoal powered street irons.

After seeing how the ironing vendors would dump charcoal into the garbage she began research on how the smoke from the charcoal impacts their lungs. In her pursuit, she also learned to her shock how charcoal and deforestation are related. Determined to find a solution she came up with a solar-powered cart.

A mobile solution that gives six hours of power for five hours of sunshine and also helps the vendors go door to door.

This ironing cart meets 13 of the 17 Sustainable Development Goals.



HOW TO BECOME A SUSTAINABILITY CHAMPION

BY TRISHA RAVINDRANATH

Can we fight to end poverty, inequality, and injustice? Navigate through to find a solution against climate change? Today when a sense of powerlessness grips the world, the Sustainable Development Goals carry even more weight, as global objectives that have the potential to bring in a century of peace shouldered by our shared humanity. But is it just a fantastical dream if we are looking at international cooperation among world leaders and governments?

Or can we effect change at an individual level too?

Yes! Like Julia Carney says in her poem ‘Little Things’ that “Little drops of water, make the mighty ocean”, in the same way, each of us can make a difference by incorporating these simple yet impactful changes !



LEVEL 1: SOFA STAR

Things we can do from our couch

- Reduce paper bills and go digital! Let's move over to paying bills online.
- Instead of just liking an interesting social media post on climate change, share and amplify it so everyone in your network sees it too.
- Switch off the lights and fans when we leave the room or don't need them and not just on Earth day. Let's make everyday Earth day!
- There are so many companies that follow sustainable practices. Before buying anything, let's do our bit of online research to find and buy our products from such companies.



LEVEL 2: HOUSEHOLD SUPERSTAR

Things we can do at home

- Let's air dry instead of using a dryer for our hair or running a machine for our clothes.
- While doing laundry let's wait till the load is full and ditch the shower and move to bucket baths to save more water.
- Eat more greens and less meat. If looking for some inspiration, head over to the game changers documentary on Netflix.
- Give composting a try! Food scraps from the kitchen waste can be composted and helps recycle nutrients. Today there are many easy and ready-to-use compost bins available online.
- Recycling more saves the landfills from piling up.
- Buy products with zero or sustainable packaging!
- Invest in energy-efficient appliances and replace incandescent bulbs with LED lights.



LEVEL 3 : NEIGHBOURHOOD CHAMPION

Things you can do in your neighbourhood

- Let's shop local and support neighbourhood vendors.
- Let's walk, cycle and take the public transport as much as possible and save the car trips for longer distances and bigger groups.
- Carry your own refillable bottle, metallic straws and coffee mug thus creating lesser waste from packaging.
- Always keep a tote bag handy so we never have to accept a plastic bag while shopping.
- Spark joy like Marie Kondo and donate what we don't use around the house. Clothes, books, bags in good condition can be given to charities that will pass them on to someone who needs it more.

CLIMATE DA VINCI

BY TRISHA RAVINDRANATH

The graver the issue, the more important it becomes to communicate it. When looking at data from climate change, it can get overwhelming for most to understand.

This is why Glaciologist and artist Jill Pelto believes that art is an effective tool to connect people to important topics.

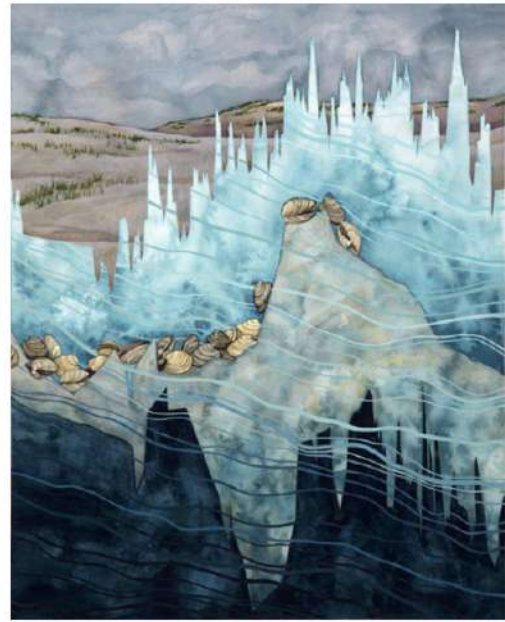
Named 'Da Vinci of data art' by CBS Boston, her work focuses on using scientific research and climate data in watercolour paintings that show human-environment connections.

She engages people with climate science using photographs, science papers, landscape art etc. She hopes to create a more emotional view of climate change through her artwork.

Pelto graduated from the University of Maine and resides outside Portland currently. She loves to combine her artwork with her local surroundings. For example, one of her paintings was a picture of the common plants in Maine and the plants from warmer climates that started to emerge there, showing the contrasting species with a graph that displays a potential rise in Maine's temperature.



Here is some of her awe-inspiring and heart touching work.



THE BEAUTY OF EARTH

*Take a moment,
Put your worries behind.
Take in the beauty around.
Let it relax your mind.
From the welcome warmth of the morning sun,
As it plays upon your eyes,
Enticing you from your slumber to awaken and
come alive.*

*Or the gentle touch of an Autumn breeze,
As it chills and caresses your face, beckoning you
to start your day
And let go of the night's embrace.*

*The sound of the birds as they twitter and sing,
Still nestled in the warmth of the trees.*

*Of the rising morning sun.
Embrace the peaceful aura Of the break of dawn...*

*Savour the soft caress of the gently moving breeze.
Listen to its nifty tune among the swaying trees...
The beauty of earth shines always brightest!*

- Arpita Kaushik



जलवायु परिवर्तन से संघर्ष : राजस्थान में बंजर भूमि का घने जंगलों में परिवर्तन

(कराच गांव पर व्यक्तिगत अध्ययन)

- अर्पिता कौशिक

उदयपुर से लगभग 75 किमी दूर कराच गांव शायद पश्चिमी राजस्थान का आखिरी गांव है। निवासी आदिवासी समुदायों से संबंधित हैं और उनका निर्वाह कृषि, पशुधन पालन और जंगलों से जलाऊ लकड़ी की बिक्री पर निर्भर करता है। हालांकि, हाल के वर्षों में, उन्होंने देखा है कि बढ़ते मरुस्थलीकरण से उनके गांव को खतरा है। 2000 की शुरुआत में पूर्व ग्राम प्रधान हंसा राम जैसे निवासियों ने देखा कि आम वन भूमि का क्षरण हो रहा है। भूमि घटना ने संकेत दिया कि गांव मरुस्थलीकरण की ओर बढ़ रहा था। इसके लिए जिम्मेदार कारकों में मिट्टी का कटाव, वनस्पति का नुकसान, सतही जल और भूजल संसाधनों की कमी और वनों की कटाई जैसे अन्य मानवशास्त्रीय पहलू शामिल हैं। बिगड़ती परिस्थितियों ने निवासियों को बाहर के अवसरों की तलाश करने के लिए मजबूर किया, जिससे पलायन हुआ।

वास्तव में, द एनर्जी एंड रिसोर्सेज इंस्टीट्यूट (टीईआरआई) द्वारा प्रकाशित एक रिपोर्ट के अनुसार, भारत अपनी 30% भूमि मरुस्थलीकरण के कारण खो रहा है और राजस्थान तीव्र गिरावट का सामना करने वाले छह राज्यों में से एक है।

हालांकि, 2021 में, कराच के ग्रामीणों के पास बताने के लिए एक अलग कहानी है।

वे अब अपने जंगलों को मरुस्थलीकरण के लिए खोने के खतरे का सामना नहीं करते हैं, क्योंकि वे सामूहिक उपयोग के लिए ग्राम समुदाय के स्वामित्व वाली 339 हेक्टेयर सामान्य भूमि को बहाल करने में कामयाब रहे हैं।

• समुदाय द्वारा समुदाय के लिए

हंसा राम कहते हैं, "यह गांव अरावली पर्वत श्रृंखला की तलहटी में स्थित है, जो रेगिस्तान के कठोर मौसम को पड़ोसी मेवाड़ क्षेत्र के साथ-साथ पूर्वी राजस्थान में प्रवेश करने से रोकता है। हरित आवरण के नुकसान के कारण, हमारा गांव नहीं था एक बाधा है, और हम बेनकाब हो गए हैं।"

वह कहते हैं कि अत्यधिक चराई, वन संसाधनों के दोहन और वनों की कटाई के कारण भूमि का तेजी से गायब होना, और यह कि इस क्षेत्र पर रेगिस्तान का कब्जा हो सकता है। "हम समस्या का समाधान करना चाहते थे लेकिन सामाजिक पदानुक्रम के कारण 600 ग्रामीणों को एक साथ लाना मुश्किल हो गया,"।

2002 में, ग्रामीणों ने फाउंडेशन ऑफ इकोलॉजिकल सिव्योरिटी (FES) से मदद ली, जो एक ऐसा संगठन है जो जंगलों, चरागाहों, बंजर भूमि और जल संसाधनों जैसे गाँव के सामान्य संसाधनों सहित अपमानित प्राकृतिक संसाधनों के पुनर्जनन के लिए काम करता है।

गांव वालों ने एफईएस से मदद लेने का निश्चय किया। हंसा राम के नेतृत्व में समिति ने सामुदायिक संसाधनों के संरक्षण, संरक्षण और प्रबंधन के लिए काम करना शुरू किया।

मोती राम कहते हैं कि ग्रामीणों ने सामूहिक रूप से योजनाएँ बनाई और संरक्षण और संसाधन प्रबंधन के लिए नियमों को लागू किया और आज तक उनका पालन किया।

"वन संसाधनों के इष्टतम उपयोग को सुनिश्चित करने के लिए प्रत्येक परिवार के केवल एक व्यक्ति को जलाऊ लकड़ी और वन संसाधनों को इकट्ठा करने की अनुमति है। इसके अलावा, एक समर्पित क्षेत्र चराई के लिए आवंटित किया जाता है, जबकि शेष क्षेत्र को पुनः उत्पन्न करने की अनुमति है। प्रत्येक वर्ष, सामान्य के 9 हेक्टेयर भूमि को पशुओं के चरने के लिए खुला रखा जाता है," वे बताते हैं।

मोती राम कहते हैं, "पहले किसान मुश्किल से एक भी फसल ले पाते थे, लेकिन अब बड़े हुए खेत में 2-3 फसल ले सकते हैं। गेहूँ, मक्का, तूर, सरसों, मूँग और मूँगफली कुछ ऐसी फसलें हैं, जिनकी खेती की जाती है।"

संरक्षण के साथ-साथ मिट्टी और नदी संरक्षण कार्य, साथ ही वृक्षारोपण गतिविधियों को वनों को फिर से तैयार करने के लिए किया जाता है। ग्रामीणों ने 1 लाख देशी पेड़ लगाए, घास के बीज बोए और जंगल के प्राकृतिक उत्थान की दिशा में काम किया।

गांव अब वन अधिकार अधिनियम (2006) के तहत सामुदायिक वन अधिकारों तक पहुंचने के लिए आगे बढ़ रहा है। निवासी अपनी साझा भूमि और संसाधनों पर अधिक नियंत्रण हासिल करने के लिए काम कर रहे हैं, जो उन्हें पर्यावरण में सुधार और बेहतर पारिस्थितिक, सामाजिक और आर्थिक परिणामों के लिए वन संसाधनों के प्रबंधन की दिशा में बेहतर काम करने में मदद करेगा

आज, कराच लचीलापन और स्थिरता का एक उदाहरण बन गया है। ग्रामीणों ने जलवायु परिवर्तन के खिलाफ लड़ाई लड़ी है और चार ब्लॉकों के आसपास के गांवों को प्रेरित किया है। उनके प्रयास प्रदर्शित करते हैं कि कैसे स्थानीय समुदाय साझा संसाधनों का प्रबंधन कर सकते हैं और पर्यावरण संरक्षण में महत्वपूर्ण भूमिका निभा सकते हैं और साथ ही उन्हें मजबूत भी कर सकते हैं



मैसेडोनिया के पूर्व यूगोस्लाव गणराज्य की हीट-स्वास्थ्य कार्य योजना का कार्यान्वयन



- अर्पिता कौशिक

अलर्ट जारी करने के लिए जिम्मेदार निकाय-

2007 की गर्मियों की गर्मी में, उच्च तापमान ने मैसेडोनिया के पूर्व यूगोस्लाव गणराज्य में 1 000 से अधिक समयपूर्व मौतों में योगदान दिया। डेमिर कपिजा में हवा का तापमान 45.7 डिग्री सेल्सियस तक पहुंच गया, जो रिकॉर्ड शुरू होने के बाद से सबसे अधिक तापमान है। मैसेडोनिया के पूर्व यूगोस्लाव गणराज्य में जलवायु परिवर्तन से बहुत गर्म मौसम की इन अवधियों में वृद्धि होने की उम्मीद है, और सरकार ने यह सुनिश्चित करने के लिए योजना बनाई है कि देश भविष्य में और अधिक तैयार हो। अनुकूलन उपायों को लागू करने और जलवायु परिवर्तन के कारण अत्यधिक गर्मी से जुड़े परिणामों को रोकने के लिए, स्वास्थ्य क्षेत्र के लिए अनुकूलन के लिए राष्ट्रीय रणनीति के भीतर राष्ट्रीय गर्मी-स्वास्थ्य कार्य योजना विकसित की गई थी। इसका लक्ष्य गर्मी और स्वास्थ्य चेतावनी जारी करके हीटवेव से जुड़ी रुग्णता को कम करना है; संबंधित क्षेत्रों में योजना को प्रोत्साहित करना; सभी नीतियों में मुख्य धारा स्वास्थ्य; और सार्वजनिक और स्वास्थ्य क्षेत्र के श्रमिकों के बीच जागरूकता बढ़ाना। योजना द्वारा प्रस्तावित प्रमुख समाधानों में से एक विशेष रूप से मई और सितंबर के बीच हीटवेव की समय पर घोषणा के लिए एक चेतावनी प्रणाली का कार्यान्वयन था। इस योजना में शामिल हैं:

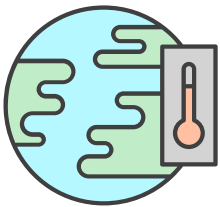
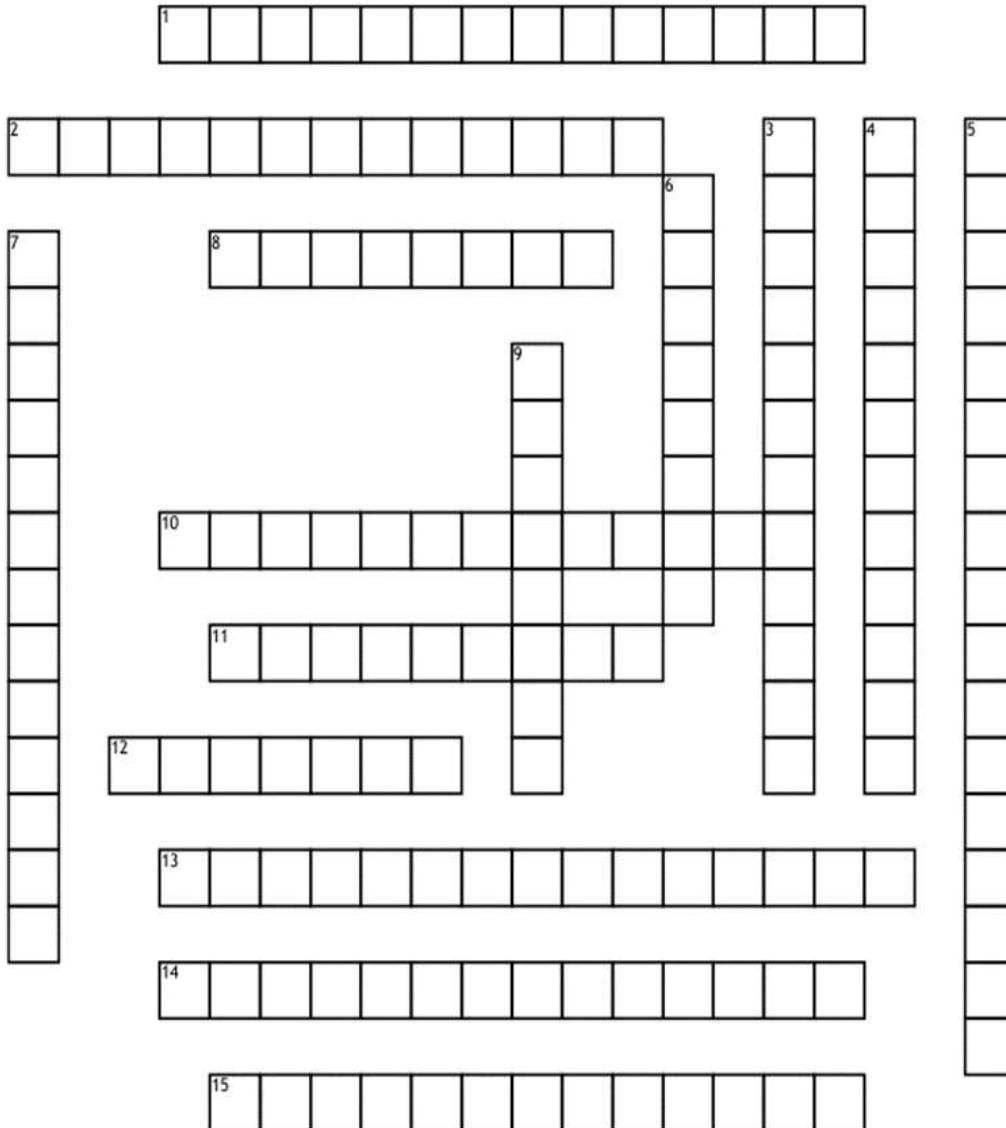
- हीट हेल्थ एक्शन प्लान
- मैसेडोनिया के पूर्व यूगोस्लाव गणराज्य की हीट हेल्थ एक्शन प्लान का फ्रंट पेज
- अलर्ट प्रदान करने के लिए एक पूर्व चेतावनी सेवा
- हीटवेव के 24-48 घंटे पहले तक;
- कार्रवाई के लिए विशिष्ट तापमान थ्रेसहोल्ड;
- मीडिया के माध्यम से अलर्ट का संचार;
- हीटवेव के दौरान किए जाने वाले सुरक्षा उपायों के बारे में नागरिकों और स्वास्थ्य और सामाजिक क्षेत्रों को सूचित करने के लिए गतिविधियाँ;
- स्वास्थ्य और सामाजिक के अंदर गर्मी के जोखिम को कम करने के लिए सिफारिशें
- कमजोर जनसंख्या समूहों के लिए संस्थाएं और विशेष सुरक्षा योजनाएं;
- कर्मियों के प्रशिक्षण और उचित स्वास्थ्य सुरक्षा सहित स्वास्थ्य

गर्मी-स्वास्थ्य अनुकूलन उपायों की वार्षिक लागत का अनुमान 12 मिलियन स्थानीय मुद्रा इकाइयों (एलसीयू) पर लगाया गया था, जो प्रति वर्ष 170 मिलियन एलसीयू की स्वास्थ्य क्षति लागत की तुलना में बीमारी और मौतों में वृद्धि के परिणामस्वरूप होगा।



CROSSWORD

Environmental Issues



Across

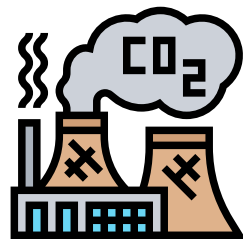
- 1. A reduction of a layer in the stratosphere.
- 2. The result of human practices like greenhouse gases.
- 8. A water form due to certain pollutants in the atmosphere.
- 10. A change in global climate patterns.

- 11. Contamination of the environment.
- 12. Also known as an illness or sickness.
- 13. When a car burns fuel, CO₂ is released.
- 14. Increasing population to unsustainable levels.
- 15. Loss of trees and is no longer used for forests.

Down

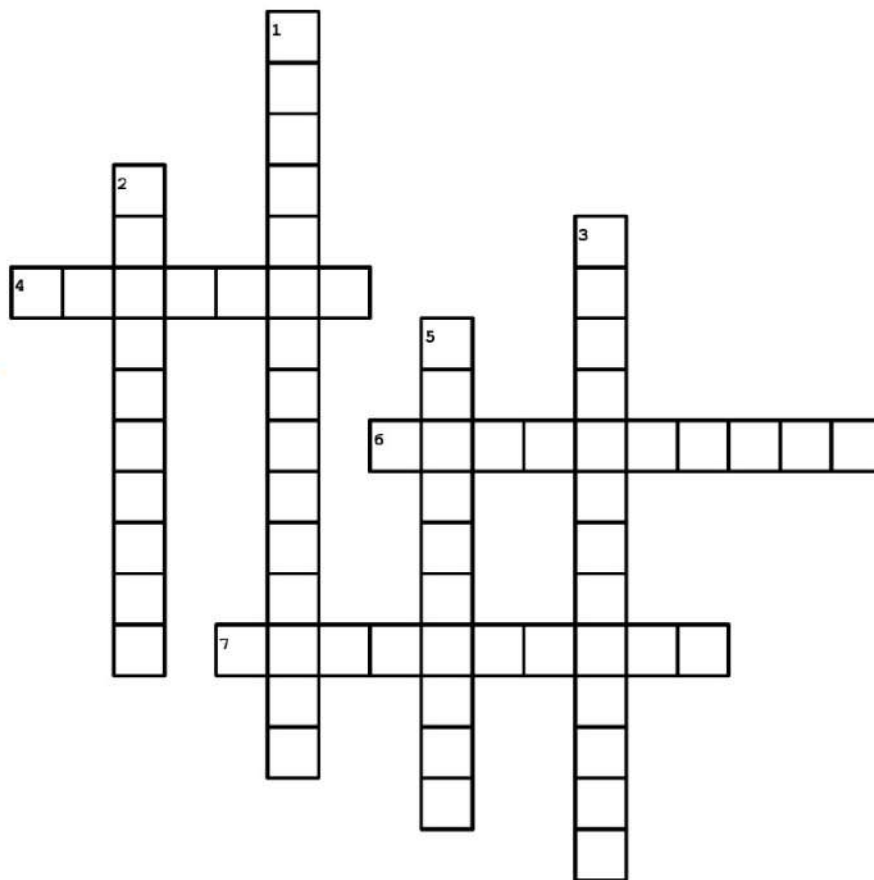
- 3. Melting of the ice in the North and South.

- 4. Extremely toxic waste.
- 5. Using too much of something.
- 6. Killing an animal out of season or without a license.
- 7. Contributes to greenhouse effects and may smell.
- 9. Extracting oil from underground.



Climate Change Crossword

Answer the questions below by filling in the blanks in the puzzle.



ACROSS

4. A greenhouse gas whose presence in the atmosphere affects the earth's temperature and climate system
6. Any ground that remains completely frozen—32°F (0°C) or colder—for at least two years straight
7. Energy generated by differences in heat the Earth's atmosphere

DOWN

1. the total amount of greenhouse gases that are generated by human activity
2. relatively narrow bands of strong wind in the upper levels of the atmosphere
3. a gradual increase in the overall temperature of the earth's atmosphere generally attributed to the greenhouse effect caused by increased levels of carbon dioxide, CFCs, and other pollutants.
5. device used for measuring wind speed and direction

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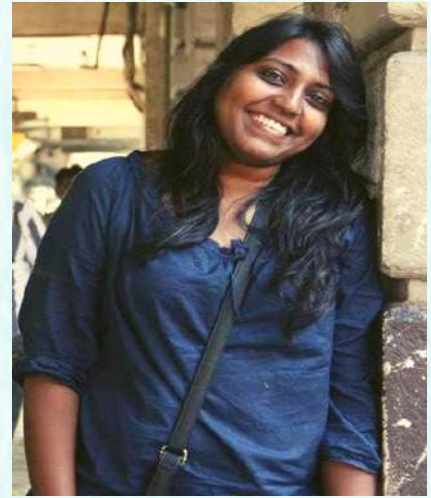
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