2. ASSESSING THE STATE OF CLIMATE CHANGE

Climate Change from A-Z (New Yorker, November 2022)

This article is an excellent summary of the challenges and possibilities we have to mitigate and adapt to climate change. Published by the *New Yorker* Magazine.
Go to: https://www.newyorker.com/magazine/2022/11/28/climate-change-from-a-to-z

COP27 Report: United Nations' COP 27 (Conference of the Parties) on Climate Change – November 2022

The 27th International Summit on Climate Change was held last November. The general link to the two-week summit is this:
https://unfccc.int

Here is the link to the news releases:
https://unfccc.int/news

Here is the wrap-up news release:

UN Climate Change News, 20 November 2022 – The United Nations Climate Change Conference COP27 closed today with a breakthrough agreement to provide "loss and damage" funding for vulnerable countries hit hard by climate disasters.

"This outcome moves us forward," said Simon Stiell, UN Climate Change Executive Secretary. "We have determined a way forward on a decades-long conversation on funding for loss and damage – deliberating over how we address the impacts on communities whose lives and livelihoods have been ruined by the very worst impacts of climate change."

Set against a difficult geopolitical backdrop, COP27 resulted in countries' delivering a package of decisions that reaffirmed their commitment to limit global temperature rise to 1.5 degrees Celsius above pre-industrial levels. The package also strengthened action by countries to cut greenhouse gas emissions and adapt to the inevitable impacts of climate change, as well as boosting the support of finance, technology, and capacity building needed by developing countries.

Creating a specific fund for loss and damage marked an important point of progress, with the issue added to the official agenda and adopted for the first time at COP27.

Governments took the ground-breaking decision to establish new funding arrangements, as well as a dedicated fund to assist developing countries in responding

to loss and damage. Governments also agreed to establish a “transitional committee” to make recommendations on how to operationalize both the new funding arrangements and the fund at COP28 next year. The first meeting of the transitional committee is expected to take place before the end of March 2023.

Parties also agreed on the institutional arrangements to operationalize the Santiago Network for Loss and Damage, designed to catalyze technical assistance to developing countries that are particularly vulnerable to the adverse effects of climate change.

COP27 saw significant progress on adaptation, with governments agreeing on the way to move forward on the Global Goal on Adaptation, which will conclude at COP28 and inform the first Global Stocktake, improving resilience among the most vulnerable. New pledges, totaling more than $230 million, were made to the Adaptation Fund at COP27. These pledges will help many more vulnerable communities adapt to climate change through concrete adaptation solutions. COP27 President Sameh Shoukry announced the Sharm el-Sheikh Adaptation Agenda, enhancing resilience for people living in the most climate-vulnerable communities by 2030. UN Climate Change’s Standing Committee on Finance was requested to prepare a report on doubling adaptation finance for consideration at COP28 next year.

The cover decision, known as the Sharm el-Sheikh Implementation Plan, highlights that a global transformation to a low-carbon economy is expected to require investments of at least $4-6 trillion a year. Delivering such funding will require a swift and comprehensive transformation of the financial system and its structures and processes, engaging governments, central banks, commercial banks, institutional investors and other financial actors.

Serious concern was expressed that the goal of developed country parties to mobilize jointly $100 billion per year by 2020 has not yet been met, with developed countries urged to meet the goal, and multilateral development banks and international financial institutions called on to mobilize climate finance.

At COP27, deliberations continued on setting a “new collective quantified goal on climate finance” in 2024, taking into account the needs and priorities of developing countries.

“In this text we have been given reassurances that there is no room for backsliding,” said Stiell. “It gives the key political signals that indicate the phasedown of all fossil fuels is happening.”

A stark report from UN Climate Change underpinned his remarks, as did discussions throughout the two-week conference. According to the report, implementation of current pledges by national governments put the world on track for a 2.5°C warmer world by the end of the century. The UN’s Intergovernmental Panel on Climate Change indicates that greenhouse gas emissions must decline 45% by 2030 in order to limit global warming to 1.5°C.

COP27 President Sameh Shoukry said, “The work that we’ve managed to do here in the past two weeks, and the results we have together achieved, are a testament to our collective will as a community of nations, to voice a clear message that rings loudly today, here in this room and around the world: that multilateral diplomacy still works. Despite the difficulties and challenges of our times, the divergence of views, level of ambition or apprehension, we remain committed to the fight against climate change. We rose to the occasion, upheld our responsibilities and undertook the important decisive political decisions that millions around the world expect from us.”

Speaking about the year ahead, Stiell said UN Climate Change will help Parties and future COP Presidencies navigate this path to the new phase of implementation.

A summary of some of the other key outcomes of COP27 is below.

Technology

COP27 saw the launch of a new five-year work program at COP27 to promote climate technology solutions in developing countries.

Mitigation

COP27 significantly advanced the work on mitigation. A mitigation work program was launched in Sharm el-Sheikh, aimed at urgently scaling up mitigation ambition and implementation. The work program will start immediately following COP27 and continue until 2030, with at least two global dialogues held each year. Governments were also requested to revisit and strengthen the 2030 targets in their national climate plans by the end of 2023, as well as to accelerate efforts to phase down unabated coal power and phase out inefficient fossil fuel subsidies.

The decision text recognizes that the unprecedented global energy crisis underlines the urgency to rapidly transform energy systems to be more secure, reliable, and resilient, by accelerating clean and just transitions to renewable energy during this critical decade of action.

Global Stocktake

Delegates at the UN Climate Change Conference COP27 wrapped up the second technical dialogue of the first global stocktake, a mechanism to raise ambition under the Paris Agreement. The UN Secretary-General will convene a ‘climate ambition summit’ in 2023, ahead of the conclusion of the stocktake at COP28 next year.

The U.S. National Climate Assessment Report (2018, 4th report issued)

https://nca2018.globalchange.gov

This document is filled with great background information on the issues we face with a changing climate. From the Overview section:

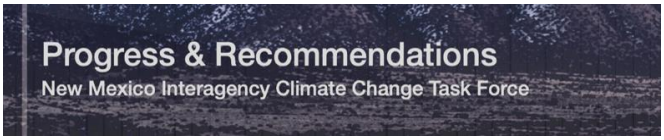
Earth's climate is now changing faster than at any point in the history of modern civilization, primarily as a result of human activities. The impacts of global climate change are already being felt in the United States and are projected to intensify in the future—but the severity of future impacts will depend largely on actions taken to reduce greenhouse gas emissions and to adapt to the changes that will occur. Americans increasingly recognize the risks climate change poses to their everyday lives and livelihoods and are beginning to respond (Figure 1.1). Water managers in the Colorado River Basin have mobilized users to conserve water in response to ongoing drought intensified by higher temperatures, and an extension program in Nebraska is helping ranchers reduce drought and heat risks to their operations. The state of Hawaii is developing management options to promote coral reef recovery from widespread bleaching events caused by warmer waters that threaten tourism, fisheries, and coastal protection from wind and waves. To address higher risks of flooding from heavy rainfall, local governments in southern Louisiana are pooling hazard reduction funds, and cities and states in the Northeast are investing in more resilient water, energy, and transportation infrastructure. In Alaska, a tribal health organization is developing adaptation strategies to address physical and mental health challenges driven by climate change and other environmental changes. As Midwestern farmers adopt new management strategies to reduce erosion and nutrient losses caused by heavier rains, forest managers in the Northwest are developing adaptation strategies in response to wildfire increases that affect human health, water resources, timber production, fish and wildlife, and recreation. After extensive hurricane damage fueled in part by a warmer atmosphere and warmer, higher seas, communities in Texas are considering ways to rebuild more resilient infrastructure. In the U.S. Caribbean, governments are developing new frameworks for storm recovery based on lessons learned from the 2017 hurricane season.

Without additional action, climate-related risks will continue to grow. Decisions made today determine risk exposure for current and future generations and will either broaden or limit options to reduce the negative consequences of climate change. While Americans are responding in ways that can bolster resilience and improve livelihoods, neither global efforts to mitigate the causes of climate change nor regional efforts to adapt to the impacts currently approach the scales needed to avoid substantial damages to the U.S. economy, environment, and human health and well-being over the coming decades.

The 2018 National Climate Assessment is organized under four major headings: Summary Findings, Overview, Report Chapters, and Downloads.

Under “Report Chapters,” Chapter 25 concerns the U.S Southwest.

New Mexico Government’s Climate Change Report (2021)



In 2021, New Mexico issued a major report on the state's plans to reduce carbon emissions. The report, 35 pages in length, covers both the current state of emissions by different sectors of our life/economy, and plans for further reductions.

Go to this link to download the full report:

https://www.climateaction.nm.gov/wp-content/uploads/2022/05/NMClimateChange_2021_final.pdf

Working to reduce emissions and meet target goals is called Mitigation. For example, a 2018 study of New Mexico's emissions indicate that we released 118 metric tons of carbon into the atmosphere (1.8% of the U.S. total). Of that amount, the following sectors were responsible for various percentages of the 118 metric ton total:

Oil & Gas 53%
Commercial & Residential 3%
Agriculture 7%
Natural & Working Lands 5%
Transportation 14%
Electricity Generation 17%. (Produced through the burning of coal,oil, and gas to produce electricity)
Other Industry 7%

The state's multi-department report has set goals for further reductions by the year 2030.

The report is organized into these sections:

2021 Climate Action by the Numbers (which outlines the next set of goals for the state to achieve)

Science, Data, and Modeling

Reducing Greenhouse Gas Emission Levels (which includes goals for reductions by such matters as industrial pollution, transportation, and generating electricity)

Building Adaptation and Resilience (which refers to work we can do to address the impact of such matters as public health, managing emergencies, forest fires, and water use issues)

Reports like these can create a "feel good" response. We have hope. We can do better. And by sharing the report publicly, state officials are asking citizens to hold them accountable to demonstrate effective efforts to meet these goals. For that reason alone, this report is well worth reviewing. We have a job to do

How to conduct an Energy Audit at your church:

** Many utility companies offer a free energy audit. PNM in Albuquerque does, so check with your local utility for this free service.

Energy Audit for your Congregation: **WHAT IS ENERGY STAR?**

ENERGY STAR is **the government-backed symbol for energy efficiency**. It was introduced as a volunteer labeling program to identify and promote energy-efficient products. ENERGY STAR products, which can be identified by the label pictured below, use less energy and help you save money on your electric bill.

ENERGY STAR for Congregations

An average worship facility can save up to 30 percent on energy through no-cost actions, strategic investment, and smart operations and maintenance. These savings can verify the careful stewardship of members' donations and can be repurposed to the mission and ministries of the congregation.

This thoughtful stewardship of natural resources reduces pollution that is harmful to human life and health, protects our life-sustaining ecosystems, and conserves resources for future generations. Action on efficiency gives active life to the stewardship teachings of virtually every faith tradition and joins with EPA's mission to protect human health. ENERGY STAR provides the tools, training, and technical support to help your congregation achieve and sustain a high level of stewardship.

To get started now, download the free *Action Workbook for Congregations* from this page.

- Next, learn why the powerful, free Portfolio Manager is the national standard tool for understanding baseline energy and water use and for tracking your savings and pollution prevention.

- Then help educate your congregational leadership and urge them to join ENERGY STAR as a partner at no cost or reporting obligation.
- See a 34-minute recorded webinar on ENERGY STAR for Congregations or a 50-minute recorded webinar on Financing Energy Efficiency and Renewables.
- Visit the Portfolio Manager training center for more webinars, videos, slide sets, and fact sheets, as well as a link to our highly rated Help Desk, where you can always ask a question.
- Educate and engage your staff and "Green Team" with Bring Your Green to Work resources, and learn about the Treasure Hunt campaign guide, worship facility treasure map, worksheet and videos.

See which Congregations have earned the ENERGY STAR.

Solar Rebates for Churches

SCF (Sustainable Capital Finance) specializes in helping religious institutions save money with Solar PPA Solutions. With more than 25 projects completed, SCF is the perfect partner to navigate going Solar**.**
https://www.scf.com/

SCF for religious institutions**:**
https://scf.com/solar-for-religiousinstitutions/?Religious&gclid=CjwKCAiA2fmdBhBpEiwA4CcHzZAZloEf4SJfZ4BCXiaw51fNVsuz0adhZmWwO3bBRJxAwaUwXLHsHRoC01QQAvD_BwE

Clearway Community Solar is an energy sharing program:
https://www.clearwaycommunitysolar.com/how-community-solar-works/

PNM (Public Utility of New Mexico) **Quick Saver program**.
Quick Saver is a program for small businesses (churches) that makes it easy for small business accounts to save energy and reduce electric bills by making lighting and refrigeration retrofit upgrades. Accounts with a maximum monthly peak demand of 200 kW over the previous 12 months qualify.
https://www.pnmenergyefficiency.com/quick-saver/