



The Go-Back Club

Newsbooklet of the Simple-Living Brigade: #23, July 2015

This is OUR paper: www.gobackclub.org

Our members live in 19 states, Washington D.C., two Canadian provinces, Korea and Nigeria.



Photos by Iona

On less than a quarter of an acre, Patrick Reeder (30 and a single father, holding his son, Coriander with landscaper friend Andrew Scott) has visions of teaching others how to get so much out of gardening that the potential to feed millions through replication stirs his imagination and his passion for experimenting with new gardening techniques and old ones.

Tiny Piece of Ground Holds Huge Potential for the World

By Iona

Who would have thought that, on less than .18 of an acre, so much food could be grown? And that .18 of an acre includes a house. Additionally, Patrick Reeder has accomplished all of this in only three years! “If you have a maximum amount of space, there is too much waste but, if you don’t, you can concentrate on making the best use of every inch,” he says.

My office in Mount Union, Pennsylvania is adjacent to Patrick’s home and, when I took a stroll around the block last Summer, I snatched a few raspberries that were sticking out from the fence. The place actually looked a mess but, with my ecological eyes, I could

tell that a lot of work was going on and it wasn’t hard to envision what the next phase might look like.

When I interviewed Patrick, he explained that last year was “construction” and this year is “beautification.” His friend and landscaper, Andrew Scott, was with him when I showed up with my camera and notepad. Both have been working hard these last two days but took time out to give me a tour.

Probably the project Patrick is most enthusiastic about is hydroponics and he is building a closed-loop system in which, “The fish feed the plants and the plants clean the water for the fish.” He has built the supporting structure and the pond. He

explained how PVC pipes with different size holes will pump water from the pond up to the top and gravity will bring it back down through plants which can grow in water like tomatoes, lettuce (100 heads) and strawberries. “You don’t have to weed or worry about soil-born diseases; it takes a lot of work out (of gardening),” he said. “That’s my excitement I got for this year — I can’t wait to do that. It’s a new project.” He started this amazing project because he didn’t want to mow the grass. “Grass is useless,” he said.

This little plot will produce so many fruits and vegetables (plus honey) that he has three other friends who have formed a co-op with him to sell the organic produce he grows.

Potential *continued on page 2*



If this looks like Heaven on Earth to you, you could be right. If more people grew enough organic food to feed others using just a tiny piece of land, then much of the hunger in the world could be eliminated. Patrick Reeder (cover page) has such dreams for his experimental gardening. Story and more photos on page 6. Please keep reading....

Potential continued on page 6

I Goofed: My summer vacation starts after this issue (not the last one)! Next newsbooklet in October!

What on Earth is The Go-Back Club? A Simple-Living Brigade.

Our Motto: Use it up, wear it out, make it do or do without.



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Founder/Editor: Iona Conner

Contributors: Ekwe Chiwundu Charles, Allen Hengst, Kim Stenley, Wynde Winston

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What is The Go-Back Club about?

We want to change people's hearts. Our members live simply (or try to) so that our collective carbon footprint grows smaller and smaller every day. We are working toward a common goal of reducing our individual im-

pacts on climate change to protect future generations and all life.

Who are we trying to attract?

We hope to reach people who are concerned about global warming and realize that they are part of the problem but don't know what to do. We invite them to join our Club.

What are we trying to achieve?

Our members are part of the global movement of people who know that global warming is an immediate threat and who want to prevent further harm and even reverse the situation.

We look to others for inspiration.

People are "like a blind man walking randomly toward a cliff. The only thing that will save him is to go backwards." Michael Mann (climate scientist and member of the Intergovernmental Panel on Climate Change), to John and Iona Conner about climate tipping points on a visit to Penn State, where Mann is director of the Earth Systems Science Center

"Our life is frittered away by detail. Simplify, simplify, simplify! Simplicity of life and elevation of purpose." Henry David Thoreau

Please send us your stories and photos. We rely on our members' contributions.

Africa's Advocates Say Fossil Fuel Subsidies Must Go

By Alex Kirby

Climate News Network: June 5, 2015

With more than 600 million people in sub-Saharan Africa still lack access to electricity, the continent is being urged to take a leading role in crucial climate negotiations.

LONDON — Developed countries should rapidly end subsidies for fossil fuels, says a group established to argue for equitable and sustainable development for Africa.

The Africa Progress Panel (APP), chaired by the Nobel laureate and former UN secretary-general Kofi Annan, says the G20 countries should set a timetable for phasing out the payments, with a ban on exploration and production subsidies as soon as 2018.

“Many rich country governments tell us they want a climate deal but at the same time billions of dollars of taxpayers’ money are subsidizing the discovery of new coal, oil and gas reserves,” Mr. Annan said. “They should be pricing carbon out of the market through taxation, not subsidizing a climate catastrophe.”

The APP also urges African governments, investors and international financial institutions to increase investment in energy significantly in order to unlock Africa’s potential as a global low-carbon superpower.

Poverty and Inequality

The report, “Power, People, Planet: Seizing Africa’s Energy and Climate Opportunities,” calls for a tenfold increase in power generation to provide all Africans with access to electricity by 2030. This, it says, “would reduce poverty and inequality, boost growth and provide the climate leadership that is sorely missing at the international level.”

The panel recognizes recent improvements in the negotiating positions of the European Union, the U.S. and China. But it says that current proposals still fall far short of a credible deal for limiting global warming to the internationally-agreed threshold of no more than 2°C above pre-industrial levels.

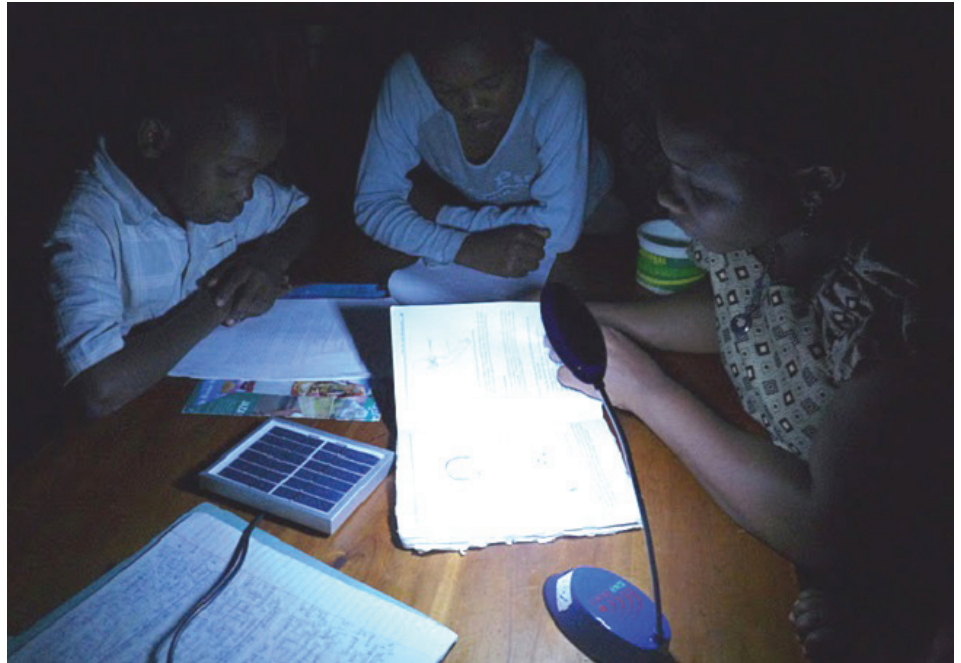


Photo by EEP Southern and East Africa via Flickr

Young school children studying by the light of a solar lamp in Tanzania.

It also condemns Australia, Canada, Japan and Russia for, as it puts it, effectively withdrawing from constructive engagement on climate.

“By hedging their bets and waiting for others to move first, some governments are playing poker with the planet and future generations’ lives,” Mr. Annan said. “This is not a moment for prevarication, short-term self-interest and constrained ambition but for bold global leadership and decisive action.

It would take the average Tanzanian eight years to use as much electricity as an average American consumes in a single month.

“Countries like Ethiopia, Kenya, Rwanda and South Africa are emerging as front-runners in the global transition to low carbon energy. Africa is well positioned

to expand the power generation needed to drive growth, deliver energy for all, and play a leadership role in the crucial climate change negotiations.”

Mr. Annan said the panel categorically rejected the idea that Africa had to choose between growth and low-carbon development.

The report tells a stark story of what the continent’s energy poverty means. In sub-Saharan Africa, it says, 621 million people — more than half of Africa’s population — lack access to electricity and the number is rising. Excluding South Africa, which generates half the region’s electricity, the whole of sub-Saharan Africa uses less electricity than Spain.

It would take the average Tanzanian eight years to use as much electricity as an average American consumes in a single month. And, over the course of one year, someone boiling a kettle twice a day in the UK uses five times more electricity than an Ethiopian consumes in a year.

The report urges African governments to use the region’s natural gas to provide domestic energy as well as exports and to harness Africa’s vast, untapped renewable energy potential.

Africa continued on next page

News Briefs Submitted by Our Members

Milk Basket Project in Africa Partners With GBC

By Ekwe Chiwundu Charles, Nigeria
See GBC March 2015, page 5
(www.gobackclub.org)

Non-Governmental Organization (NGO) start-up aims to help save starving children and build libraries in poor communities in Nigeria.

The Milk Basket will represent an institution or organization set up to provide nutritional tips, safe food processing practices and distribute milk packs to malnourished children. Recently I thought of adding canned water too because some communities in the deep creeks don't have access to clean water; most times they drink from the same river they throw all sorts of rubbish into. It will be more like a charity organization. Also I'm hoping I can build libraries in towns right in the middle of many communities. These communities lack educational materials, the children here resort to hooliganism and touting because there is no inspiration for them.

Even the outgoing president of Nigeria is from the Niger Delta yet it's one of the most underdeveloped parts of Nigeria. He failed to build libraries knowing that his tribesmen are not keen on getting education per say. The future is a blur for the kids inside these creeks (education wise).



Photo by Ekwe Chiwundu Charles

"Save Some Kids" is the title of this photo, which was taken after the last flooding in Odi, a riverine community in Bayelsa State where Chiwundu served for one year after graduating from college. The children are malnourished and without clean drinking water or adequate medical care.

To learn more or to make a donation, go to <https://angel.co/milk-basket>.

Note from Iona: Earlier this year Chiwundu invited The Go-Back Club to co-sponsor his newly-formed NGO. I was thrilled to be able to do that and give our "Club" an international presence so I eagerly agreed.

Africa continued from page 3

Energy Infrastructure

The report says corruption must be cut, utility governance made more transparent, regulations strengthened and public spending on energy infrastructure increased. It calls as well for strengthened international co-operation to close Africa's energy sector financing gap, estimated to be US\$55 billion

annually to 2030. This includes US\$35 billion for investments in plant, transmission and distribution, and US\$20 billion for the costs of universal access.

A global connectivity fund, with a target of reaching an additional 600 million Africans by 2030, is needed to drive investment in on-grid and off-grid energy provision.

The report challenges African govern-

ments and their international partners to raise their ambitions for the United Nations climate summit in Paris in December. It says 2015 is the year not only for a climate agreement but for agreeing to the sustainable Development Goals and how to finance them. And it recalls Nelson Mandela's words on the ending of apartheid: "It always seems impossible until it's done."

Victory: We Won a Fracking Moratorium in Maryland

Submitted by Wynde Winston, Maryland

Great news: A two-and-a-half year fracking moratorium just became law in Maryland.

After the bill passed with massive majorities in the legislature, Governor Larry Hogan decided to neither sign nor veto it, allowing it to become law.

This is an enormous victory for grassroots activists like you and the over 3,500 other CREDO activists who signed a petition urging passage of the bill. After former Governor Martin O'Malley lifted the state's moratorium on his way out of office, countless activists across the state

and hundreds of organizations and business sprang into action to urge the General Assembly to halt fracking — and we won!

This victory in Maryland is part of a national grassroots uprising against fracking and fossil fuel extraction at the community level. From the years-long fight to stop the Keystone XL pipeline to the successful campaign to ban fracking in New York and campaigns across the country to ban fracking at the local level, people have repeatedly demonstrated that fiercely determined grassroots organizing can overcome the entrenched power of the oil and gas industry.

The fight isn't over. The moratorium is temporary and we still have to fight to ban fracking in Maryland. But this victory buys us critical time to organize for the next step

in this fight.

Thank you for your activism.
Zack Malitz, Campaign Manager
CREDO Action from Working Assets

The New York Times and CBS Release Stunning New Poll

Submitted by Kim Stenley, Maryland

A huge majority of Americans support a sweeping overhaul of how political campaigns are financed.

Which of the following three statements comes closest to expressing your overall view of the way political campaigns are funded in the United States?

Poll continued on next page

News Briefs Submitted by Our Members

ONLY MINOR CHANGES

13%

FUNDAMENTAL CHANGES

39%

COMPLETELY REBUILD

46%

[Poll of 1,022 respondents conducted May 28 to 31, 2015]

It's yet another sign we have incredible momentum nationwide!

But if we're going to keep it going, we must hit our next critical milestone: 250,000 Citizen Co-Sponsors for the Constitutional Amendment to overturn Citizens United: http://act.endcitizensunited.org/page/s/co-sponsor?source=ad_2015.04.01_b1_adwords_co-sponsor.



Bat-Killing White-Nose Syndrome Spreads West to Oklahoma

Submitted by Allen Hengst
Washington, D.C.

(Note from the Editor: I forwarded this to GBC member Gloria DeSousa in Vermont and her reply follows the story.)

By Bob Berwyn
Summit County Citizens Voice: May 23, 2015

A bat-killing fungal disease that has wiped out millions of the winged mammals has spread west into Oklahoma, reinforcing concerns that bats across the country are at risk from white-nose syndrome ... [which] has spread to 26 states since 2006. In addition to Oklahoma, bats in Mississippi and Minnesota have tested positive for the

fungus.

"The continued westward march of this disease puts many new bat species at risk," said Mollie Matteson, a senior scientist at the Center for Biological Diversity. "There have been dramatic and tragic losses in multiple bat species in the eastern United States," Matteson said, chiding state and federal wildlife managers for failing to protect at-risk bat species.

Oklahoma is now the westernmost reach of the white-nose syndrome fungus, which has also been confirmed in Iowa bats this winter ... Industries such as timber, oil and gas, mining and wind energy recently opposed listing of the northern long-eared bat, fearing it would restrict commercial activities. But giving bats stronger protection is critical to protecting them from other threats that would exacerbate the impacts of white-nose syndrome ...

Scientists have estimated the economic value of insect-eating bats to American agriculture at \$22 billion annually. Bats also eat tons of insects harmful to forests and their guano is essential to the survival of extremely rare cave organisms like cave salamanders and fish.

Iona —

Very exciting!!! It's worth living that long just to see the day. Hooray!

So sad though to read about the bats. I love bats! I built special bat boxes for them when I lived in Middlesex, VT but you know what they loved best? My sun umbrella!!!

I bought more umbrellas but they liked only the umbrella I used for myself on the picnic table. So, I never opened it again and just sat in the sun until I couldn't take the heat any longer and went inside or the cool woods.

Gloria DeSousa

How to Get Your Pension Fund to Divest from Fossil Fuels

Submitted by Allen Hengst
Washington, D.C.

By Patrick Collinson 
The Guardian: May 9, 2015

1. Can I make my pension scheme entirely divest from fossil fuels?

There are no legal barriers to a pension fund selling out of fossil fuel investments. The fiduciary duty of trustees to ensure the

best returns for members is a flexible one, according to industry representatives at the National Association of Pension Funds.

As the law stands, a decision to divest, taken for financial reasons — such as a view that the assets of BP, Shell, etc, will become "stranded" in the ground and therefore worthless — is an acceptable reason for a fund to do so ...

2. What if they say divestment isn't technically possible?

This is because many workplace pension funds simply follow an index — such as the Financial Times Stock Exchange (FTSE) 100 — where giant resource companies such as BHP Billiton and Glencore (both big coal miners), as well as BP and Shell, make up a significant part of the index.

But in recent months, big index companies, such as MSCI and FTSE, have created indices which track the FTSE 100 or the S&P500 but eliminate the fossil fuel companies. Pension funds, if they want, can choose to track these indices, making divestment relatively straightforward ...

3. Will divestment hit returns?

Not necessarily. Indeed, in recent years, indices which screen out fossil fuel companies have outperformed those that don't.

MSCI found that investors who divested from fossil fuels would have earned an average return of 13% a year since 2010, compared to the 11.8% earned by conventional investors.

4. I am self employed with a personal pension. Can I divest?

Yes and no. Major pension providers such as Standard Life, Aviva and Legal & General do not currently offer a fossil-free option — the best you can do is to encourage them to do so ...

5. I am a student with no pension. Is there anything I can do?

Yes. Encourage your parents to divest. The web site Push Your Parents is aimed at college and university students who want to influence their parents on climate change.

Also, read UN Backs Fossil Fuel Divestment Campaign at <http://www.theguardian.com/environment/2015/mar/15/climate-change-un-backs-divestment-campaign-paris-summit-fossil-fuels>.



[By Iona] Patrick Reeder stands in front of the greenhouse he is building in back of his home so that he can grow more plants and seedlings in cooler weather and get a head start on the growing season. He has done all of this work in less than three years. When I first saw his yard last year, it frankly looked like a disaster but he explained that the construction part had to come first. This year (his third) is for beautification and it certainly is starting to look beautiful. On the day of my interview, both he and his landscaper friend, Andrew Scott, were working hard but they gladly took a break for this interview and photo shoot. Since my office is next door, I can easily watch the progress and in a couple of months, I can walk around the block, freely picking raspberries and kinnis he is growing so passers-by like me can nibble on tasty treats. And nibble I shall!

Potential continued from page 2

When Patrick explained his trellis design for beans and peas, there were some baby kohlrabi, brussels sprouts, lettuce and cabbage plants in the dirt already. He planted short plants in front to get the sun but not block the beans and peas in the rear so they could get full sunlight as they creep up the supporting trellis in the back.

And I must not forget the triangular bed for currants and blueberries. I have been invited to go foraging in this beautiful garden as the crops ripen and I love blueberries!

How does a 30-year-old single father, a National Guard infantry veteran of seven years (with one year in Iraq) and a man with a Bachelor's degree in criminal justice learn so much about growing food?

"Go online; you can grow (almost) anything with hydroponics," he explained. One must also experiment. At the moment, there are three trial beds for strawberries in which Patrick will use different techniques to learn which one works best.

Next, Patrick enthusiastically showed me the lush blackberry and golden-berry bushes (like yellow raspberries but sweeter). Then came the bee hives! And a bee "watering hole" with brightly-colored marbles to prevent the precious bees from drowning.

Last year, these little critters created 90 pounds of honey in each hive! Patrick sold out. But last winter's severity and Patrick's absence due to a trip to Boston resulted in a massive die-off so he is awaiting the arrival of a new shipment of bees from Georgia.

Now for the orchard — two apple, two plum, two pear and one peach tree.

"Why just one peach tree?" asked this ignorant reporter, who thought all fruit trees needed a pair to produce fruit.

"If there is a seed in the center of the fruit, it doesn't need to be pollinated."

"Oh."

Not only does Patrick raise and sell honey (does one "raise" honey?) but he makes and sells hot sauce, will have five rental apartments when gutting and rebuilding is

completed in town and just opened a garage for minor car repairs and service (charging "the cheapest labor in Mount Union," \$40 an hour). "Every garage I go to rips people off on parts and I don't do that," he told me. All of this while working 25 to 30 hours in a group home for disabled people.

As if that weren't enough, Patrick helps other people build gardens.

One of his most pleasing and potentially delightful new plants is the Arctic kiwi, which he placed, not only in the garden, but along the fence facing the front sidewalk so that people walking by can help themselves to free and delicious fruit once it is ripe, just as I helped myself to a few raspberries last Summer as I was walking by the back end of his property.

I wish you every success, Patrick, and may my readers share your story worldwide to inspire others to follow your lead.

And thus my story ends but Patrick's is just beginning.



Top left: Bee hives can produce up to 90 pounds of honey a year.

Middle left: A bee watering hole with marbles to prevent the bees from drowning.

Bottom left: berries will soon be ready to eat.

Top Right: Current plants and blueberry bushes.

Bottom right: A trellis will support climbing beans and peas as they reach for the sun, while shorter plants in front will get the sunlight they need, too.





“HYDROPONICS IS MY EXCITEMENT I GOT FOR THIS YEAR. I CAN’T WAIT TO DO THAT. IT’S A NEW PROJECT.”

--Patrick Reeder--

Patrick is building a closed-loop hydroponic system in which, “The fish feed the plants and the plants clean the water for the fish.” Below left is the pond, which will be cleaned up and ready soon and on the right is a gardener’s best friend — the compost pile.

What Is Hydroponics?

By Dr. Merle Jensen 
Controlled Environment Agriculture Center
Campus Agricultural Center
Tucson, Arizona

Hydroponics may simply be described as growing plants with nutrients and water and without soil. The water must be delivered to the plant root system. The root system may hang directly in the nutrient solution, be misted by it or can be enclosed within a container or a trough which is filled with a substrate [a replacement for soil].

The substrate may consist of many different types of materials, such as perlite, sand, sawdust, wood chips, pebbles or rockwool. All substrates must provide good water-holding capacity, yet be porous for gas exchange. Between watering events, they become the storage location for water and nutrients for the plant root system. The roots grow within the substrate to secure the plant within the container or trough. Water is typically recycled with a nutrient film technique and ebb and flood systems.





Photo Jordan Stead

The towering Polar Pioneer, one of two Arctic-bound Shell drilling rigs, arrived at the Seattle waterfront to an uneasy home port in a city protesting energy companies and the carbon economy on several fronts and in multiple ways.

Paddle in Seattle: Kayaktivist Flotilla Protests Shell's Plan to Drill Oil in Arctic

Submitted by Allen Hengst
Washington, D.C.

By Allison Morrow 
King 5 News: May 16, 2015

Environmental activists in kayaks and boats launched in Elliott Bay on Saturday for another protest over Shell's giant Arctic oil drilling rig. More than 100 kayaks and other boats made their way to the Polar Pioneer as police and the Coast Guard looked on.

The so-called kayaktivists want to make their message clear — the rig isn't welcome here and Shell oil has no business drilling in the Arctic ... Seattle Department of Planning and Development inspectors visited the Port on Friday.

They formally determined that Terminal 5 is not permitted for oil equipment

maintenance. If the Port doesn't apply for the right permit, that could lead to fines.

"After about a two-week period it'll be \$150 a day for 10 days and then after that it's \$500 a day until they come into compliance," said Wendy Shark, Department of Planning and Development.

By Susanne Posel
Occupy Corporatism: May 16, 2015

Called the Paddle in Seattle, Shell No helped organize the protest to "confront Shell" and "stand in solidarity with indigenous peoples and people of color who endure the brunt of extraction and climate chaos."

Seattle Mayor Ed Murray and the city council are among those in opposition to the drilling ... Royal Dutch Shell and other

oil corporations are biding their time as Arctic ice melts because of the opportunity to explore for massive amounts of petroleum reserves at the polar ice caps underneath the seabed. More melting means easier access to these alleged reserves.

Kumi Naidoo, Greenpeace International executive director, commented that, "Melting Arctic ice is a warning, not a business opportunity." [Alaska] Senator Lisa Murkowski asserted that the approval "of Shell's exploration plan for Alaska's Chukchi Sea marks another important step toward the United States assuming a leadership role in the Arctic."

Murkowski has her senatorial seat because of hefty contributions from the oil and gas industry. Since 2009, Murkowski has received \$611,531.



Glacier Loss Raises High Concern Over Water Supplies

By Tim Radford
Climate News Network: June 2, 2015

Massively increased ice melt in the high Himalayas because of climate change could seriously jeopardize the flow of water for billions of people in Asia.

LONDON — The glaciers of the Everest region of the Himalayan massif — home to the highest peak of all — could lose between 70% and 90% of their volume as a result of global warming.

Asia's mountain ranges contain the greatest thickness of ice beyond the polar regions. But new research predicts that, by 2100, the world's highest waters — on which billions of people depend for their water supply — could be at their lowest ebb because of the ice loss.

Many of the continent's great rivers begin up in the snows, fed by melting ice in high-peak regions such as the Hindu Kush, the Pamir and the Himalayas.

Joseph Shea, a glacial hydrologist at the International Centre for Integrated Mountain Development in Kathmandu, Nepal, and French and Dutch colleagues report in *The Cryosphere* journal that they used more than 50 years of climate data and sophisticated computer models of predicted climate change to study the pattern of snowpack and seasonal melt in the Everest region.

Temperature Increase

They found a decrease of 20% since 1961 and signs that most, if not quite all, of the stored ice could disappear in the next 85 years.

“The signal of future glacier change in the region is clear: continued and possibly accelerated mass loss from glaciers is likely, given the projected increase in

temperatures,” Dr. Shea says.

“Our results indicate that these glaciers may be highly sensitive to changes in temperature and that increases in precipitation are not enough to offset the increased melt.”

That mountain glaciers in the temperate zones and the tropics are in retreat is not in doubt. In the last two years, researchers have established patterns of ice loss in Nepal, in the tropical Andes of South America and in the Canadian highlands.

“THE SIGNAL FOR FUTURE GLACIER CHANGE IN THE REGION IS CLEAR AND COMPELLING.”

Other teams have stepped back to look at the big picture and one calculation is that around 160,000 glaciers in Europe, Asia and the Americas are shedding 260 billion tons of ice each year. This is roughly as much as is now being lost from the Greenland and Antarctic ice sheets.

Glaciers continued on page 12

Apollo Plan Asks for the Moon in Switch to Renewables

By Alex Kirby

Climate News Network: June 3, 2015

Eminent group urges governments to make the massive research investment that would enable the world to switch from fossil fuels to renewable energy by 2025.

LONDON — The vision is simple, the cost would be eye-watering and the result could stop the growing threat from burning fossil fuels in its tracks.

The authors of an initiative called the Global Apollo Programme say that, given the required high level of investment, it should be possible within 10 years to meet electricity demand with reliable wind and/or solar power that is cheaper in every country than power based on coal.

They say the scale of ambition needed to produce “baseload” power from renewable energy that is generated consistently to meet minimum demand matches that which sent the first humans to the Moon in 1969 — at a cost, in today’s prices, of £150 billion (around US\$230 billion).

Each country involved in the Global Apollo Programme would be expected to contribute at least 0.02% of its GDP — the total value of its economy — for 10 years to finance Research, Development and Demonstration (RD&D) with an annual boost of £15 billion (around U.S.\$23 billion).

The seven authors of the Programme include: Sir David King, former chief scientist to the UK government; Lord Martin Rees, a former president of the Royal Society, the UK’s national academy of science; Lord John Browne, a former CEO of the energy giant BP and the economist Lord Nicholas Stern, who led the team that published the 2006 Stern Review on the Economics of Climate Change.

Irreparable Damage

To avoid irreparable damage to the planet, they argue, world governments’ agreement to limit the Earth’s temperature rise to 2° C above pre-industrial levels demands an absolute limit on the total accumulated CO₂ that can be produced. On present trends, that limit will be breached by 2035.

To reduce our annual output of CO₂ as urgently as we must, carbon-free energy will rapidly have to become cheaper to produce



Photo Supplied by Author

The authors of an initiative called the Global Apollo Programme say that, given the required high level of investment, it should be possible within 10 years to meet electricity demand with reliable wind and/or solar power that is cheaper in every country than power based on coal.

than energy based on coal, gas and oil. The major scientific and technological research program required will demand the best minds in the world and the best science.

The authors say the Programme should be modeled on the International Technology Roadmap for Semiconductors, which has reduced semiconductor prices year on year for 30 years.

A committee appointed through the Programme’s member countries will co-ordinate international research to unblock bottlenecks it identifies, including electricity storage and transmission, and the generation of wind and solar power.

“OVER THE LAST YEAR, THE PROGRAMME HAS BEEN PRIVATELY DISCUSSED WITH GOVERNMENTS WORLDWIDE AND HAS BEEN WIDELY WELCOMED.”

The Programme hopes to be able to base itself beside the International Energy Agency in Paris but it will include many countries that are not members of the IEA. All members will still be responsible for spending their own national renewable energy RD&D budgets.

The authors say, “Over the last year, the Programme has been privately discussed with governments worldwide and has been widely welcomed. The issue was to be discussed at the G7 meeting on June 7-8

and it is hoped that by the end of the year the major countries of the world will have decided to join.”

Their timetable is challenging. Last year, Sir David King said, “The objective is that, by 2020, renewable power should be cheaper than coal in all sunny parts of the world and by 2025 in all parts of the world.”

Immense Gains

The gains would be immense, not only in combating climate change but also in tackling health problems and poverty as well.

The Programme is intent on replacing fossil fuels with renewable energy in baseload energy generation. But, for the many millions of people who are not on the electricity grid, the need is for a solution closer to hand. Success for the Programme would spur renewables on both national and household scales.

For example, the UK-based charity Solar Aid aims to eradicate expensive kerosene lamps from Africa by 2020, replacing them with affordable solar lamps in remote rural regions. Set up by the company Solar Century, it says a \$10 solar lamp pays for itself in a month, releasing money for health, education and farming — and providing clean, free light for years.

Sir David said green energy was already cutting air pollution and reducing carbon emissions but making it cheaper mattered too. “Once we get to that point,” he says, “we are winning in all the battles.”



Remember your dreams.

Letters and Emails from our Members



- Iona,**
Great edition. Thank for printing my letter.
Marty Hann, Pennsylvania
- (or at least I can't figure out how to do that).
Have a wonderful Summer.
Judy Weglarski, Pennsylvania
- Iona's reply:**
It's always good to hear from you. Thanks for the compliment.
I prepare this with professional publishing software, not Word. If you open the pdf, you will see a hand, a capital I and a camera up top. Click on the capital I and that will let you select printed material you'd like to use. Highlight it all, then copy and paste. My headlines are in different boxes, as are the captions to photos so you will have to repeat the process to get everything and, if you want the photo, too, then I think you just right click and select "save as."
I hope this works for you so you are not frustrated. I appreciate you even wanting to
- do this. If you're still stuck, I'll be happy to copy one or two articles and email them to you every month.
- Thanks Iona,**
Forwarded to friend in New Zealand pointing out that article to her ("From Watersheds to Mountains, June GBC, p. 9).
Monday evening Marty Hann and I drove to Grant Township, Indiana County (PA) and participated in the Department of Environmental Protection hearing against the frack waste water injection well.
Very inspiring with 24 people testifying against the permit, all well informed and passionate to protect their home place. This is a major Rights of Nature case against a big corporation.
Alanna Hartzok, Pennsylvania
- Dear Iona,**
Thank you very much. Lovely picture for the poem!
Yes, you should go out and swim and pick berries — and look at the wild flowers!
Very best,
Sandy Chilcote, Newfoundland, Canada
- Hi, Iona.**
It's beautiful as usual. Iona, why do you transmit it as a PDF file, rather than a Word file?
It's hard to pull out certain things to print in Adobe. One can't cut and paste from Adobe to Word to get just a single article or section

Glaciers *continued from page 10*

The consequences for sea level rise are obvious and ominous. But glaciers have local importance too: their Spring and Summer melt-water drives hydroelectric power, nourishes industrial growth in the cities and irrigates the rice and wheat crops on which billions of people depend.

The rate and extent of glacial retreat, the scientists say, depends on the levels of greenhouse gases emitted from the burning of fossil fuels in the future. And some of the loss depends on the changes in the altitude at which water freezes.

Freezing Levels

Right now, in the Everest region, ice forms at 3,200 meters (two miles) in January but at 5,500 meters (3.4 miles) in August.

But according to Walter Immerzeel, assistant professor of physical geography at the University of Utrecht in the Netherlands, these freezing levels could rise by between

800 (half a mile) and 1,200 meters (three-quarters of a mile) by 2100. "Such an increase would not only reduce snow accumulation over the glaciers but would also expose 90% of the current glacier area to melt in the warmer months," he says

Research at high altitudes is difficult, dangerous and subject to error. The scientists focused their study on four large glaciers in Nepal's Dudh Kosi river basin, which holds 400 square kilometers (248.5 miles) of glacial ice.

They then tested eight future IPCC climate scenarios. In 2007, the IPCC reported that the Himalayan glaciers could vanish as early as 2035 — but three years later had to apologize for what was described as an "unfounded" claim.

The Cryosphere authors say their own results should also be treated cautiously. But, their paper concludes, "The signal for future glacier change in the region is clear and compelling."

