

How much can the Earth endure?

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Marcin Wrzos

Although the awareness of globalization became widespread, in the sphere of ecology there still persists a much more local approach, aimed at achieving economic objectives, or – at best – on the conservation of local nature. At the same time humanity exceeds more and more planetary boundaries.

The biggest expansion of mankind occurred during the holocene era, in the last 12,000 years, when the climate was very favorable. Stability of the average global temperature allowed for the development of agriculture and in effect – civilization. The conditions of life on Earth began to change when the industrial revolution started. People stopped living in small communities, that could change places if the conditions of live would deteriorate. According to Paul Crutzen, a Dutch meteorologist and a Nobel Prize winner in the sphere of chemistry, it is advised to talk about a new geological era – antropocene.

Continued on page 3



How we are consuming the Earth

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Paweł Średziński



If we do not reduce our consumption and do not change our everyday habits, the Earth will not be able to provide for us. People consume today 50% more resources than the Earth can produce. Poles – 100% more, which ranks us in 45th place among 148 countries. If this trend is maintained, by 2030 we will need more than two planets in order for humanity to survive. This worrying conclusions come from „The Living Planet” report, being prepared every two years by the international ecological organisation WWF.

Continued on page. 3

Water, snow, ice...



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Peter Gleick

Snow. Glaciers. Icecaps. River flows. All of these are vulnerable to climate change, especially rising temperature. This isn't just theory. It's now observable fact.

Scientists worry about the growing threat of climate change because the global climate is tied to everything that society cares about: human and environmental health, food and industrial production, water availability, extreme events, and more.

Figuring out how all these pieces tie together is difficult. And many of us, from scientists to the public to policy makers, have only a partial understanding of the true implications of a changing climate for our economies, societies, and the world around us. But we already know enough to be worried.

Continued on page. 2

Renewables under pressure



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Agnieszka Grzybek

The speciality of the Civic Platform is grilling – of party colleagues, cabinet members, that hear in the media that they can be fired at time, and also legislative projects. That leads us to the example of the law on renewable sources of energy, that is being developed for three years now.

Work has been progressing slowly – partly because the Polish government prefers other sources of energy (nuclear and shale gas), partly because it is a captive of big energy companies, that want to keep their market monopoly and are afraid of competition for the decentralised, democratic renewable energy sector. The pressure was so big that in April 2013 the Prime Minister, Donald Tusk, decided to throw away the old project and created a new team to work on the law, consisting of Ministers of Finance, the State Treasury and the Economy, the chief of the Chancellery of the Prime Minister of Poland, and, for a short time and probably by accident, the Minister of the Environment.

Continued on page 17

Time for a Trilateral Climate Commission



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Adam Ostolski

The Polish climate policy – hiding the head in the sand in front of the dangers associated with climate change – has a very striking element. We can observe an amazing agreement between players with conflicting interests. The government of Donald Tusk is supported in this matter both by PKPP Lewiatan, and by NSZZ Solidarność. This trio is defending energy generation based on fossil fuels, also on the European level.

At the same time we can see more and more climate refugees at the borders of our continent, fleeing from the Global South, where the climate crisis hits the hardest. But changes are also affecting our country, and their effects will only intensify. Even today we can observe more frequent tornados, intense storms, floods and droughts. The effects of climate change observed in daily life will manifest themselves i.e. in higher food prices. Our children will be hit even harder.

Continued on page. 20

Poland in a 4°C warmer world



MARCIN POPKIEWICZ:

“We will experience a drastic shift of climate zones and coastline, a whole spectrum of extreme weather events, hydrates in the sea floor”

Time to push the fossil lobby out...



SATU HASSI:

“There is clear parallel between tobacco and fossil fuels: prolonged and extensive use is lethal.”

The Climate Package needs strenghtening



REBECA HARMS

“I have been a member of the European Parliament in Brussels for close to ten years now, but what happened in July 2013 was a first”

Sluggish implementation...



MARCIN STOCZKIEWICZ:

“Directives regulate many fields of life: the development of renewable energy sources, the ecovehicles market, air pollution”

I have a dream... Nature Inc.?



RADOSŁAW GAWLIK:

“The Prime Minister declares a change in domestic policy on energy issues. Poland no longer vetoes the climate policy of the European Union”



BARBARA UNMÜSSIG:

“Furthermore governments should phase out subsidies that damage the climate and biodiversity...”

Unavoidable adaptation to climate change: Water, snow, and ice

Continued from page 1

Here is just one example: the connections between climate, snow, ice, and water resources.

My early research on climate and water showed that climate changes were likely to reduce the amount of snow we get in mountainous areas, increasing the chances of rain instead of snow and accelerating snowmelt. Since then, more and better research has confirmed and expanded this understanding. In the late 1980s, this was all hypothetical – it is what our models told us was likely to happen with warming. Those models proved correct, and we now see these and many other changes occurring. Some of these scientific findings were recently summarized in the latest, compelling IPCC release, but as an example, scientists now state that:

There is very high confidence that the extent of Northern Hemisphere snow cover has decreased since the mid-20th century.

And:

It is likely that there has been an anthropogenic contribution to

observed reductions in Northern Hemisphere spring snow cover since 1970.

And:

Human influence has been detected in warming of the atmosphere and the ocean, in changes in the global water cycle, in reductions in snow and ice, in global mean sea level rise, and in changes in some climate extremes. This evidence for human influence has grown since [the previous IPCC report]. It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century.

And projections for the future continue to be worrisome:

By the end of the 21st century, the global glacier volume, excluding glaciers on the periphery of Antarctica, is projected to decrease by 15 to 55% for [the low emissions scenario], and by 35 to 85% for [the high emissions scenario] (medium confidence).

And:

The area of Northern Hemisphere spring snow cover is projected to decrease by 7% for [the low emissions scenarios] and by 25% in [the

high emissions scenarios] by the end of the 21st century for the model average (medium confidence).

Our water systems are complex. But many climate impacts are actually pretty simple to understand. Let's focus for the moment on just one piece of the climate change picture: rising temperatures. We know the Earth is warming up because of human activities – scientists are as confident of this as we are that smoking tobacco causes cancer. Warming alone means that more precipitation will be rain and less will be snow. Higher temperature also means that what does fall as snow will melt faster, run off earlier into our rivers and streams, and evaporate more quickly back to the atmosphere.

Take the Himalayas as an example. The Hindu Kush-Himalayan region (HKH) covers parts of eight countries (Afghanistan, Bangladesh, Bhutan, China, India, Nepal, Myanmar and Pakistan), contains many of the biggest mountains in the world, and has the largest glaciers. These mountains are the headwaters of some of the world's great rivers as well – including the Ganges, Indus, Brahmaputra, Salween, Mekong, Yellow, and Yangtze. These rivers

provide drinking and irrigation water for at least one and a half billion people. Even with the accelerating climate changes, the HKH region are expected to have glaciers for centuries, but as temperatures rise, lower elevation glaciers and snow will melt, recede, and disappear, affecting water availability and especially, the timing of flow.

The eastern Himalayas and the Tibetan Plateau are already warming, like the rest of the planet. Glacial retreat, especially in the central and eastern Himalayas, is already occurring. Lower elevation glaciers are disappearing faster than higher (and colder) ones. Some rivers are already experiencing seasonal or annual increases in flow as ice melt grows. These are the regions likely to be on the front line of any challenges to water resources from climate change.

Water supplies in North America from the Rocky Mountains, the Cascades, and the Sierra Nevada are also at risk: Expect to see rising snowlines. Expect growing winter

flows and flood risks as snow turns to rain and decreasing summer flows as the snow disappears earlier and earlier in the year. Expect to see local glaciers shrink and disappear, as is already happening in Glacier National Park.

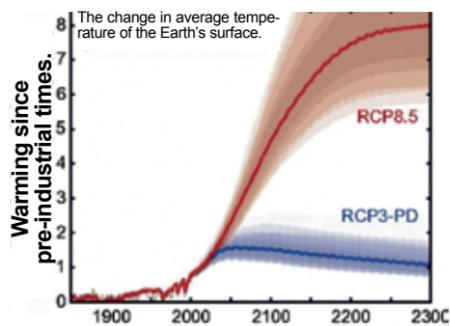
Significant climate changes will occur because we've taken too long to acknowledge and react to the problem. And that means unavoidable impacts for water resources (and other things), and inevitable adaptation and reaction. The (somewhat) good news is that planning and acting now can help reduce the worst consequences later. There are plenty of things we can do, including improved water-use efficiency and cutting waste, better planning for floods and droughts, advanced monitoring and warning systems for extreme flood events (such as we've just seen with the successful evacuations for Typhoon Phailin), more sophisticated reservoir operations, and stronger institutions to manage water and reduce water conflicts.



Poland in a 4°C warmer world

Marcin Popkiewicz

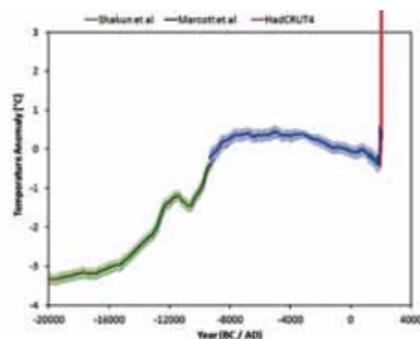
If the current rate of increase in CO2 emissions continues, by 2050 they will have risen from 35 billion tons to 100 billion tons annually. Continuation of this scenario will result in a rise in the average temperature of the Earth's surface by 4°C by the year 2100. The temperatures certainly will not stop rising in 2100: by 2300 the increase will amount to 8°C.



Picture 1. The rise in the average Earth's surface temperature in two scenarios – burning all fossil fuels (RCP 8.5) and limiting the rise to 2°C.

The scale and the pace of the changes can be illustrated by comparison of these predictions with the historical changes in the Earth's surface temperatures.

Approximately 20,000 years ago the Earth began to emerge from the Ice Age, and about 10,000 years ago the climate stabilised at the current level, about 4°C higher than at the peak of the Ice Age. The current period of stable climate – the Holocene, which has already lasted for over 10,000 years – has enabled our development and the establishment of civilisation. But it is quickly coming to an end.



Picture 2: Changes of temperature in the last 22,000 years (green and blue lines). Predictions for the future based on the scenario RCP 8.5 (the red line).

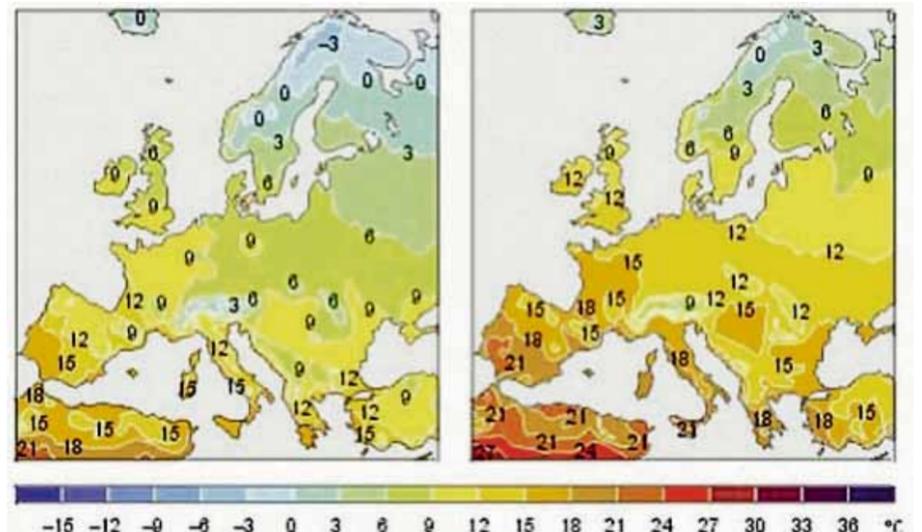
If we carry on with current trends of rises in emissions, the average temperature of the Earth's surface will rise by 8°C in two hundred years. We are moving at a blistering pace from the stable Holocene climate, on the way we will pass the maximum temperatures from warm interglacial periods of the last one million years (+1.5°C), the Pliocene climate of the last few million years (+3°C), the Eocene climate (+4°C), and even the climate of the dinosaurs' era (+8°C).

We will experience a drastic shift of climate zones and coastline, a whole spectrum of extreme weather events, ocean acidification and oxygen depletion as well as melting of the permafrost and the release of methane stored currently in the form of methane hydrates in the sea floor. When the average temperature rises by 4°C, temperatures above lands will jump by approximately 6°C.

Picture 3: Possible changes of temperature in Europe in the present century due to global warming. The map on the left shows the average annual air temperatures in the years 1961-1990. The map on the right shows possible average temperatures in the years 2071-2100.

If the current trends in greenhouse gas emissions continue, by the end of the 21st century the average annual temperature in Poland will reach about 13°C which is today's average temperature in Mediterranean countries. Greek temperatures in Poland will lead to heat waves. We could expect temperatures up to 35°C, and quite often even 40°C in the summer, resulting in droughts lasting for several weeks and consequently leading to fires and vegetation loss. In winter we will experience rainfall instead of snow.

Water level in the ocean will rise by 1-1.5 m. The Hel Peninsula will disappear under water. The only way to save the Old Town in Gdańsk and the Żuławy Region will be by means of huge engineering investments similar to those in Holland. And it will be just the beginning of ocean levels rising – in a world warmer by 4°C the sea level will rise by 8 metres. The Baltic Sea will transform itself into the Baltic Bay (as Denmark and Northern Germany will disappear under the water).



How much can the Earth endure?

Continued from page 1

The number of people living on the planet is sharply growing, and urbanization is progressing. We are exploiting natural resources very rapidly, and the fossil fuels, that have been created for millions of years are close to depletion. In effect we are witnessing more and more pollution of the environment and emissions of greenhouse gases, poured into the atmosphere.

The processes that take place in nature remind us more and more clearly, that we live in a global village. Sadly, if we make it uninhabitable we will have nowhere left to go. That is why we need to implement such policies, that can make us avert the catastrophe.

An international crew of scientists, led by Johan Rockström, the director of Stockholm Environment Institute, tried to answer the question on how to achieve this goal. The crew consisted of 28 people, among which were such personalities as Crutzen or James Hansen, a physicist and climatologist working for NASA. The results of their work were published in „Ecology and Society”, and later on – in a bit more accessible language – in „Nature”.

The conclusions in their work show a need for change. According to Rockström and his team we need to start to think about the Earth as a complicated, global system. Pursuing chaotic initiatives, having just a regional effect will not stop the unfavorable changes.

That is why the scientists, after diagnosing the state of the Earth's biosphere, specified nine areas, that in their opinion have a crucial importance for the functioning of the natural world – the systems, that sustain life on Earth. In each one we need to determine critical

points, above which dramatic results for the planet as a whole can be expected. Only the areas, in which mankind has direct impact have been taken into account.

In three of the nine spheres the safety threshold has already been crossed. The biggest reason for concern is global warming – the levels of CO₂ in the atmosphere are currently at 387 ppm (parts per million). The safety threshold according to Rockström's team is 350 ppm.

Climate change already changed the balance of radiation in the atmosphere. The effects of this can be observed in more and more extreme weather events.

Biodeversity is also in danger. The levels of extinction of who-

le species thanks to mankind are so high, that some scientists even talk about a sixth great catastrophe. The last one had place 65 million years ago and resulted in the extinction of dinosaurs. The present extinction rates are at 100 species per million, while the safety threshold according to Rockström is 10 species. If this speed of extinction will be continued, by the end of the century at least 30% of all mammal, reptile and amphibian species will become extinct, which will shake the entire Earth ecosystem.

The nitrogen cycle is also a source of concern. It is a very complicated cycle, in which fungus, bacteria, plants and animal all participate. The natural cycle of this element in nature is distorted

by using lots of nitrogen from artificial fertilizers. In consequence we see a rapid growth of non-oxygen bacteria, that produce hydrogen sulphide, and in consequence the growing number of dead spaces in the sea.

The restoration of the natural nitrogen cycle could be possible, if the levels of production of fertilizers would be 35 million tonnes per year. It will be very difficult to achieve this goal, because we currently produce 121 million tonnes.

In other areas the boundaries of the planet's natural equilibrium have not yet been crossed.

Access to drinking water can soon become a problem. The current consumption of this resource is 2,600 cubic kilometers per year. The threshold suggested by Rockström's team is 4,000 kilometers per year, which – if current trends will continue – will be crossed in the middle of the century.

Less and less soils are suitable for agriculture. Currently they account for about 15% of the planet's surface, and the agriculture already uses 12% of Earth. The further growth of the world's population may quite soon mean problems with the supply of food.

Also the phosphorus cycle is being disrupted – like nitrogen, it is because of rising production of artificial fertilisers.

The growing acidification of the oceans is another problem. The rise in CO₂ levels in the atmosphere means that more and more of compound is also in the ocean water and therefore its pH levels are rising. This already changes the ecosystems – coral reefs are especially threatened.

We were also close to breaking the threshold of the minimal levels of ozone in the atmosphere. In this area we can observe the change of

trends. The ban on freons allowed the ozone layer to slowly rebuild itself. It was possible thanks to global efforts of mankind, which raises hopes for solving other problems of this sort.

In the remaining two areas Rockström's team did not manage to show us the precise limits.

Atmospheric aerosoles have not been sufficiently examined, so we do not know, how they influence living beings and climate change.

The same goes with chemical pollution, as only few compounds emitted to the atmosphere are being monitored. Its negative impact is a fact, but we cannot precisely say how it influences people and the environment.

The idea of planetary endurance limits allows tackling problems in a complex way. A new, systemic approach shows us the way. It is a huge challenge to governments and international institutions.

Sadly, a local perspective still dominates, as we could observe during the climate negotiations in Durban. Countries such as the US, China or some developing ones do not want to put any limits to their economic activities. Economic growth still is a priority, and the issues connected with the climate are being sidelined.

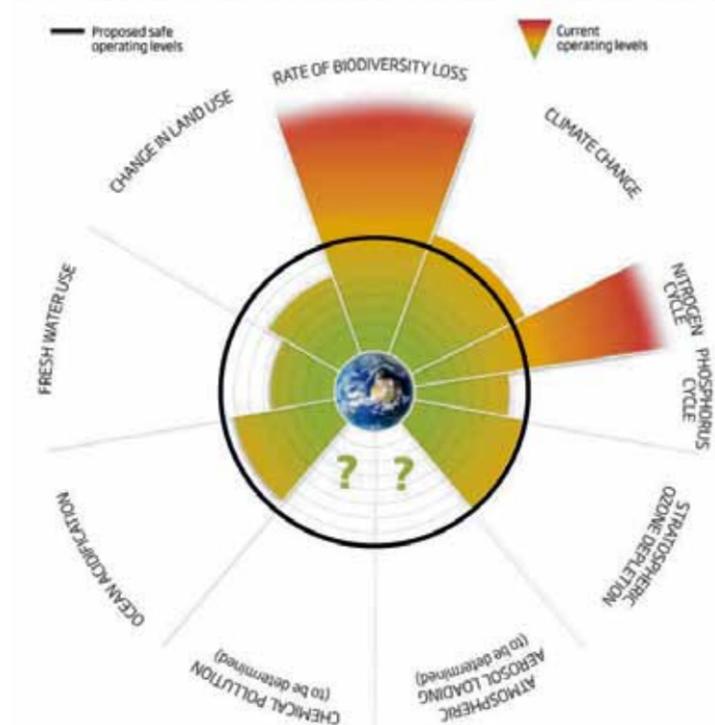
If mankind does not want to live in an unsuitable environment, it has to stop its national selfishness and make some compromises. We have sufficient knowledge – we now need to take bold steps in the right direction.

Marcin Wrzos – political scientist, photographer, blogger, member of the Green Party in Poland.

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Marcin Wrzos – political scientist, photographer, blogger, member of the Green Party in Poland.

Beyond the boundaries

We have already overstepped three of nine planetary boundaries and are at grave risk of transgressing several others



How we are consuming the Earth

Continued from page 1

On the basis of data being monitored since 1970, which concerns the condition of over 9,000 populations of 2,688 species of mammals, birds, reptiles, amphibians and fish, we know that their numbers decreased by one third on a global scale. The decreases vary depending on the region of the animals' location. In the case of tropical zones, The Living Planet Index – an indicator of conservation of species - is showing a dramatic decrease by 60% percent. It results from the great diversity of these areas and the destruction of equatorial forests, which have accelerated in the past decades. Indicators of the losses show over 40% with

regard to the decrease of the population of terrestrial animals. The worst situation is the case of seas and oceans – 62%, and in freshwater ecosystems – 70%. In this last case it has resulted in the extinction of, among others, the baiji (dolphin). The dramatic decrease of the population in the sea – 74% in 50 years - can be observed in the case of Atlantic cod. On the land the number of tigers has decreased by 70%.

Destruction of habitats and the extinction of species connected with it, is caused by our increasing ecological footprint. It is growing thanks to increasing population, consumption levels per person and the way natural resources are being used. The le-

vel of our yearly consumption has reached 50% more than the Earth can produce. It means that in order to renew the resources used, our planet needs a year and a half. The footprint is made up of the CO₂ emission, which arises from human activity, the size of fields allocated to crops and animal breeding, the amount of wood extracted from the forests, catching of fish and seafood, and infrastructure building.

The increasing footprint does not go hand in hand with the abundance of the environment of our planet. If we would want to keep the ability of the Earth to regenerate the worn out resources, every person could use a maximum of 1.8 hectare every

year - assuming the population stays at current levels. The current ratio for the world amounts today to 2.7 hectare per person. If we look at each country separately, we will see that Poland uses over four hectares, similar to other countries from West Europe, but a US citizen - over six! The footprint of occupants of China - the most populous country in the world – is increasing due to a long period of precipitative development. The countries which have increasing populations, like Brazil, India and Indonesia, right now consume 50% beyond their means.

In this year humanity crossed the level of consumption of the Earth's resources on August 20th.

It is not too late to turn back the negative trends which threaten a complete depletion of Earth. „The Living Planet Report” argues that the future of our planet depends on us. There is a reason for calling the geological period that we live in ‘antropocene’ - its name denotes the huge impact of humanity.

In every domain of our lives we should now take action to change our everyday habits, preaching the thrifty use of Earth's resources. Let's keep down activities connected with CO₂ emissions, eat food which has been produced in an environmentally-friendly way, buy products with ecological certificates. No matter where we live, we can have an impact on the condition of our planet.





Circular Economy

Utopia or Necessity?



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Ewa Sufin-Jacquemart

More and more attention is drawn today to new economic models. They are supposed to give us a way out of the impasse we find ourselves in, brought on through years of rampant economic development based on intensive use of fossil fuels and other non-renewable resources. One example of an alternative is the circular economy model, not just a university creation but – as in France – a strategic target of political activity.

The twentieth century allowed humanity to develop a linear economy, a model efficient in terms of growth but ineffective ecologically. In this economy I extract resources, including fossil fuels, I produce energy, and, using this energy, produce various products. I use the products and then afterwards throw them into the trash or burn them at an incineration plant which emits harmful substances.

Since the modern economic model is based on constant growth, at the end of the twentieth century people started to

realize that it cannot go on indefinitely. More and more people concluded that “business as usual” will lead to depletion of affordable resources and of the very biological grounds of life—to the extent that we’re condemning humanity to fight wars over drinking water and food, as well as to unpredictable, violent climate change.

Many communities, businesses, and local governments started to undertake actions aimed at limiting the harmful health and ecological effects of this model.

The time has come to seek products and services which, already at the design stage, are meant to be utilized for as long as possible, as well as a multiple transformations and recycling of natural resources, and the elimination of toxic materials and technological processes generating harmful emissions.

Positive social and environmental effects must be created at each stage of transformation: during disassembly, recycling, maintenance, or modernization, adapting the product or its particular elements and constitutive resources for a second use, either for a similar or a completely different purpose.

A circular economy, therefore, means trying to use as little natural resources as possible, using renewable resources in such a way as to guarantee their regeneration, adopts eco-design and clean production, the use of renewable energy, consumption respecting the environ-

ment, and using wastes anew as resources and processing those wastes without negative externalities.

The idea of *circular (loop, circulating) economy* derives from *industrial ecology* and other concepts developed in the 1970s, especially since the great energy crisis in 1973. These concepts include *Cradle to Cradle*, a theory by Michael Braungart and William McDonough, John T. Lyle’s *Regenerative design*, Janine Benyuys’s *Biomimicry*, and the *Blue economy* initiated by the Belgian businessman Gunter Pauli.

The source of most of these concepts is the observation of natural ecosystems, in which there is no waste; everything produced by nature is used by someone or something in another cycle of life. Research on the *circular economy* was called *circular economics*, described as early as 1976 by the Swiss architect Walter Stahel and the Swiss economist Genevieve Re-day in a report for the European Commission, “The Potential for Substituting Manpower for Energy”, which was published in 1982 as a book, “*Jobs for Tomorrow: The Potential for Substituting Manpower for Energy*”.

Work on putting these principles into practice developed in the twenty first century. Promoting this work was the basis of the eleventh five-year economic plan for China from the year 2006. In 2010 the Ellen McArthur Foundation was created in England, and its goal

Industrial ecology

„Industrial ecology is the study of material and energy flows through industrial systems”. Focusing on connections between operators within the ‘industrial ecosystem’, this approach aims at creating closed-loop processes in which wastes of ones serve as inputs for others, thus eliminating undesirable by-products. Industrial ecology adopts a systemic point of view, designing production processes in accordance with local ecological constraints whilst looking at their global impact from the outset, and attempting to shape them so they perform as close as possible to living systems. This framework is sometimes referred to as the ‘science of sustainability’, given its interdisciplinary nature and its principles can also be applied in the services sector.

Cradle to Cradle (or a loop economy)

The Cradle to Cradle™ concept and certification process, developed by German chemist and visionary Michael Braungart and American architect Bill McDonough, is a design philosophy which considers all materials involved in industrial and commercial processes to be raw materials, of which there are two main categories: technical and biological. The Cradle to Cradle framework focuses on design for effectiveness in terms of life-cycle. Cradle to Cradle concept eliminates the concept of waste, uses renewable energy, manages water use, promotes healthy ecosystems and respect of local impacts, promotes social responsibility.

Regenerative design

In the US, professor of landscape architecture John T. Lyle started developing from the 70s of XXs. ideas on regenerative design that could be applied to all systems, i.e., beyond agriculture, for which the concept of regeneration had already been formulated earlier. Arguably, he laid the foundations of the circular economy frame-

work, which notably developed and gained notoriety thanks to McDonough, Braungart and Stahel. Today, the Lyle Center for Regenerative Studies offers courses on the subject.

was to promote and develop this idea. McKinsey developed a report for the Foundation called “*Towards the Circular Economy*,” pointing out the potential of multi-billion savings for the world economy, and in December 2012 the European Commission published a document entitled *Manifesto for a Resource Efficient Europe*, which states that “in a world of growing pressure for resources and the environment, the European Union has no other choice but to strive for transformation to efficient use of resources and eventually to a regenerative circular economy”.

In France the first publication on the topic of *circular economy* appeared in 2009 by Jean-Claude Levy, entitled “*Circular economy: an urgent ecological necessity?*”. It presented China’s experience and inspired considerable debate in the media. This idea was also one of the subjects of the so-called Grenelle of the Environment in 2007, a debate which included representatives of five social sectors: the state, local governments, non-governmental organizations, employers, and employees.

In February 2013 the Institute of Circular Economy was formed. It was something be-

work, which notably developed and gained notoriety thanks to McDonough, Braungart and Stahel. Today, the Lyle Center for Regenerative Studies offers courses on the subject.

Biomimicry

Janine Benyuys, author of *Biomimicry: Innovation Inspired by Nature*, defines her approach as ‘a new discipline that studies nature’s best ideas and then imitates these designs and processes to solve human problems’. Studying a leaf to invent a better solar cell is an example. She thinks of it as ‘innovation inspired by nature’. Biomimicry relies on three key principles: nature is a model to be emulated, nature lets judge the sustainability of our innovations, nature’s value for men is not in what we can extract, but as our source of knowledge.

Blue Economy

Initiated by Belgian businessman Gunter Pauli, the Blue Economy is an open-source movement bringing together concrete case studies, initially compiled in an eponymous report handed over to the Club of Rome. As the official manifesto states, ‘using the resources available in cascading systems, (...) the waste of one product becomes the input to create a new cash flow’. Based on 21 founding principles, the Blue Economy insists on solutions being determined by their local environment and physical/ecological characteristics, putting the emphasis on gravity of the primary source of energy. The report, which doubles up as the movement’s manifesto, describes ‘100 innovations that can create 100 million jobs within the next 10 years’, providing many examples of winning South-South collaborative projects.

■ Using:

<http://www.ellenmacarthur-foundation.org/circular-economy/circular-economy/the-circular-model-brief-history-and-schools-of-thought>

tween a think-tank and a lobbying group, incorporating enterprises, universities, research institutes, social organizations, public institutions, local governments and experts, especially entities related to the waste management sector.

Circular economy is slowly becoming the subject of government policy. This can be seen by it being one of five subject fields at the September 2013 Environmental Conference, an annual coordination and policy meeting on environment and sustainable development.

More: „Energy Transition – a necessity or opportunity?” Conference. Three cases: Germany, France, Poland, 14th November 2013, 2:00pm – 6:30pm, pl. Defilad (at the entrance to the Youth Palace): Green Zone Foundation (Fundacja Strefa Zieleni), Heinrich Böll Foundation, Institute for Sustainable Development, the Embassy of the Federal Republic of Germany (<http://transformacjaenergycznacop19.evena.pl/>);

Also: „Corporate Environmental Responsibility and circular economy”, debate, Nov 22, 6:30pm, Nowy Świat 63, Green Zone Foundation (Fundacja Strefa Zieleni).

Nature, Inc.?



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Barbara Unmüßig

Today, few people retain any illusions that United Nations conventions like the Framework Convention on Climate Change and the Convention on Biological Diversity can avert global warming, the loss of biodiversity, and the depletion of arable soil and water. Likewise, the pursuit of hard caps for CO₂ emissions and stricter environmental and social standards to reduce natural-resource consumption and protect workers seems to have fallen out of vogue, with crisis-stricken economies concerned that such regulations would impede investment and trade.

As old methods have lost credibility, some governments, economists, and international institutions like the UN Environment Program have adopted a new approach, based on the view that nature is an "ecosystem service" provider. In doing so, they have shifted the onus of addressing environmental risk onto the private sector and market-based mechanisms.

In this new paradigm, ecological preservation is a commercial matter, with the natural environment amounting to nothing more than a set of tradable goods and services. The upshot of this logic is that ecosystem services will no longer be provided for free. Indeed, according to Pavan Sukhdev, the lead author of *The Economics of Ecosystems and Biodiversity* study, which aims to highlight the economic impact of environmental degradation, "We use nature because it's valuable, but we lose it because it's free."

To be sure, assigning value to ecosystem services goes beyond simply putting a price tag on them. In fact, this approach can help to shape environmental policies that more efficiently capture the benefits of biodiversity and ecosystems. Unlike GDP, some new accounting-system models include mechanisms for quantifying either the advantages of ecosystem services or the costs of their destruction, thereby creating a basis for political and economic action.

The danger lies in how easily the new paradigm could lead to the financialization of nature. Indeed, the process has already begun, with the UN's REDD program using market and financial incentives to reduce greenhouse-gas emissions from deforestation and forest degradation.

Similarly, "habitat banking" en-

ables developers to trade habitat or biodiversity credits – earned through measures to protect, restore, or enhance habitats or species – to compensate for development's environmental costs. And carbon-trading schemes reduce the value of soil and forests to their carbon-storage capacity.

All of this implies private ownership of ecosystem services. But, in many countries, the remaining intact ecosystems are in areas populated by indigenous peoples, making conflict with – and within – the affected communities all but inevitable. Local people will demand to know who is to own the services and profit from the associated credits. And whoever that is will have to assume responsibility for fulfilling complex accounting and compliance requirements, while mitigating exclusion risks.

Moreover, the private sector's willingness to finance, say, forest conservation depends on the various credits' integration into global emissions-trading schemes – a highly unlikely outcome, judging by the state of international climate negotiations. As it stands, emissions trading works only as a way to redress the industrialized countries' business-as-usual approach. Market-based instruments' growing role in conservation will merely enable businesses to manipulate their environmental obliga-

tions, while making it easier for governments to neglect their responsibility to devise effective environmental policy.

For example, last year, Brazil's powerful agribusiness lobby managed to push the government to approve a new forest code, which uses market-based instruments to give agricultural producers more leeway on conservation. As a result, landowners who clear more vegetation than is legally permitted can now return to compliance by purchasing offset credits through the Rio de Janeiro Green Exchange (Bolsa Verde) from those with more than the mandated minimum amount of forest cover.

Motivated by the new regime, those seeking to provide offset credits staged a land grab in areas where logging is not profitable – a market-based response that was accompanied by human-rights violations. Brazil's experience highlights the dangers of weak environmental policy – namely, that it offers those with money the option of buying their way out, at the expense of more vulnerable citizens, particularly indigenous peoples and poor small-scale farmers.

The global economic crisis exposed the risks of relying exclusively on markets to regulate economic activity. Given that the consequences of a global environmental meltdown would be far more devastating, de-

pending on market-based mechanisms to protect and enhance the natural environment is a recipe for disaster.

In order to avert such an outcome, people worldwide should reject the conception of nature as a service provider and call on policymakers to work actively to protect and restore habitats and biodiversity. Mechanisms for "offsetting" damaging activities must not be allowed to continue to distract from the real imperatives, like preventing deforestation and phasing out fossil fuels.

To this end, the financialization of nature using derivatives and other financial products must be forbidden. After all, while an intact rainforest's current monetary value cannot match that of the natural and mineral resources that it contains, its importance for human survival exceeds these terms.

Furthermore, governments should phase out subsidies that damage the climate and biodiversity, such as cash incentives aimed at encouraging the clearing of forestland for "productive" activities like agriculture. Doing so would enable countries to meet their objectives for environment protection while saving fiscal resources.

None of this is to say that market-based mechanisms cannot contribute to environmental protection and restoration. They can (and they have), but only if they are part of a more comprehensive framework that accounts for the natural environment's true – and unquantifiable – value.

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New energy for Germany



.....
Bartłomiej Kozek

Energy efficiency and decentralised renewables are the new way of the German energy market.

Boom

This shift is possible thanks to the red-green coalition, which ruled the country from 1998 to 2005 and decided to slowly shut down nuclear power plants and create a system that would support the development of renewable energy.

The idea of Energiewende was simple – the state, which at that time mainly subsidised generating energy from fossil fuels, decided to create a guaranteed price of energy from renewables that got into the energy grid.

The price is set in stone for 20 years, which makes investments in renewable energy profitable. In the process of the expansion of renewable energy, which makes both the installation costs and the prices of energy generated from these sources drop, the guaranteed tariff for newly installed systems also gradually falls.

The effects of such a policy are here to see – in 2011 renewables generated 19,9% of the German energy mix, while nuclear – just 17,7%. Germany is home to 35,6% of the total, global operational power of solar energy – even though it's not a country famous for

high temperatures and cloudless skies.

While in 1990 the total installed power of wind turbines in the country was 50 kW in absolute terms, in 2010 it has risen to 2,057 kW. Up to 51% of the total installed power generated from renewable sources is owned not by huge energy companies, which were dictating the prices for years, but by individual owners.

In 2011 the renewables sector employed 380,000 people – two times more than in 2005. The level of employment in this sector is over two times bigger than in coal extraction and in fossil fuel energy generation, where the number of workers steadily declines.

Controversies

The road to greener energy mix in Germany isn't a fairytale. Although the levels of support for the energy transition are high and stable, some issues connected to it are still a source of controversies between the political parties.

The most important conflict right now concerns the debate on how the industry should participate in the cost of the energy transition. At the moment it is mainly financed by energy consumers so that it acts as an incentive to use of energy efficiency measures in the households.

Karolina Jankowska in an interview with „Zielone Wiadomości” argued that the rising costs for the individual consumers result from multiple exemptions from surcharge – the difference between the total tariff paid to the producers of renewable energy in Germany and the wholesale price of electricity – these reliefs were broadened by the black-yellow government of Angela Merkel

in 2011. They were first put in place by the red-green government after pressure from the industry sector.

- Since the beginning of the rule of the coalition government of CDU/CSU and FDP in 2009 the minimal yearly energy usage required for the relief is regularly lowered, so the amount of companies exempted is rising. In 2012 there were just 700 firms, in 2013 – 2,000. The additional costs for the individual consumers and the small and medium enterprises for this year – according to the calculations made by the Greens – is 4 billion euro. The effect seen in the rise of surcharge is huge – in 2012 it was 3.6 eurocent per kWh, in 2013 is 5.3 – said Jankowska in an interview with Adam Ostolski.

According to Euractiv.com portal, the European institutions criticised the exemption of a few hundred companies from grid levies, which according to the Greens cost the taxpayers 800 million euro per year – they also suggested that this may not be a permitted form of state aid. The new idea of chancellor Merkel is to reform the complete exemption system into lowered grid levies, which would cost the companies 10-20% of standard costs.

■ The article wouldn't be possible without the creation of a special webpage dedicated to the German energy transition:
<http://energytransition.de>.

This material is a shortened version of the article that was published by the Heinrich Böll Stiftung office in Warsaw. We thank the Foundation for the permit to use it.

Smog problem in Kraków

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Beniamin Muszyński
Mikołaj Kołyszko

A complete prohibition of using coal for heating? Car sharing? An interactive city map or perhaps stove substitution? How to combat the problem of smog in Cracow, without condemning poorer inhabitants of the city to life becoming without heating?

How toxic is the smog?

Statistics differ. One of the biggest Polish portals, Onet.pl, cited work that showed that an average inhabitant of Cracow inhales an amount of dust equal to smoking 3,300 cigarettes a year. According to „Gazeta Krakowska”, a local newspaper, the average dust level in the city equals smoking 2,500 cigarettes a year. Even the most optimistic data is quite shocking – especially when we realise that this air is breathed in not only by adults, but also by people with health problems, elderly people, children, and even infants.

Besides extremely toxic substances, which are created by the burning of rubbish, the burning of coal in our city is a huge danger to its inhabitants. Due to this process, amongst other substances, PM 10 and PM 2.5 dust are being created and inhaled from the air, resulting in an increased risk of allergies, infections of the respiratory system, allergic rhinitis and conjunctivitis, a possible negative impact on the development of the foetus, and also an increase in the possibility of developing cancer (especially of the respiratory system).

The issue has become so widely discussed that the city authorities have decided to pursue the matter. A number of proposals of how to solve the problems have been put on the table. The most controversial was the proposal of the president of Cracow, Mr Jacek Majchrowski, for an outright ban on heating homes with coal. Such an idea, if not accompanied with material help for the poorest citizens of the city (of which there are a fair number...) would mean subjecting them to living in cold flats and heated only occasionally.

This idea would be good – and we are in favour of such a scenario – if the city authorities would cofinance the exchange of stoves in private homes at a satisfactory level, the process would be spread over a few years and financial assistance would be established for heating flats in other ways pro-

they are sources of additional cash. The less prosperous local authorities can – thanks to the revenue from the big farms – enhance their tourist potential. Good planning of wind energy on the lowest level not only does not destroy, but on the contrary – upgrades the tourist attractiveness of the area. Such a coexistence is possible, and the example can be seen in Wolin in West Pomerania region, where for several years we have seen the development of tourism in an area with windmills.

BK: *There is more and more talk about the potential of offshore wind energy – is the Baltic Sea a good place for its growth?*

moted by the city (e.g. with gas), so that coal would no longer be the cheapest alternative.

We therefore think that it is crucial to set up firstly some sort of financial support for the poorest which and only then enforce a ban on heating with coal. We do not want our intentions to be misunderstood, but we have already seen examples of what happens when such issues are not raised at the very beginning of the transition process.

There are also other ways of solving the problem which can be implemented quite easily. ending ,which One such initiative would be the so-called carpooling – offering other people a seat in one's car. Cars carrying more people would have the right to use the bus passeslanes on the roads.

Sadly, these solutions would only be a syrup for the cough, from which Cracow's inhabitants suffer due to the smog, and not the cure which would eliminate the source of the illness. The exhaust fumes from cars amount to just 35% of the smog – its majority comes from coal stoves, which are being used by 30,000 inhabitants of the city.

The rubbish, which is being burnt in them is the most dangerous element – and from awareness of this problem an idea of an interactive city map came into life. The citizens should point out the places, in which people heat their homes in such a way, and these places would be regularly visited by the city wardens. Unfortunately, this project has a major flaw, as it can be used as a weapon for settling accounts between neighbours. Will this idea become a successful one? Will the inhabitants of Cracow notify the authorities only in essential situations and use this tool with common sense and not as a way of abusing people they do not like? Time will tell.

The most efficient of all the presented ideas – and not surprisingly the most expensive one – would be to phase out step by step coal stoves to be replaced by other, newer technologies. It would be sensible to initiate this process in the areas of the city which regularly hit the record levels of air pollution. Obviously the process should be also supported with financial assistance for inhabitants, coming from the budget of the city.

Heating homes with coal is not an extravagance – for many people it is an economic necessity, and for some of them even the cost of this simple technology is sometimes too high to ensure a decent temperature in their homes.

AS: *Off-shore wind energy is a relatively stable and efficient source of energy, so it can play an important role in the energy mix. In 2012 there were 5 GW of installed offshore wind energy in the world, and according to the estimates of this sector it will grow further – even to 90 GW by 2020.*

Poland has a very big potential in this matter – mainly thanks to excellent natural conditions. The territory of the Polish economic sector has one of the biggest wind potential on the Baltic Sea. Until now there are now wind farms here, there are also no investment projects, that wo-

Facts and myths about wind turbines

Bartłomiej Kozek, Zielone Wiadomości: *Can you point out the obstacles to the dynamic development of wind energy in Poland? How can the government and the local authorities eliminate them?*

Arkadiusz Sekściński, vice-chair of the Polish Association of Wind Energy (Polskie Stowarzyszenie Energetyki Wiatrowej – PSEW): One of the biggest obstacles in the development of the renewables sector in Poland, and especially wind energy, is the lack of the Renewable Energy Law and the often inconsistent legislation. Until this day the Ministry of the Economy showed four versions of proposed new law to the public opinion – the first one in December 2011, the next one – in July 2012, and two more in October 2012. Each one of the proposals would result in huge changes in the renewables support system, including

support for wind energy. The unstable legislative situation slowed down new investments and made foreign investors pull out from Poland. The solution would be to pass the law on renewable energy and to create a stable support system.

BK: *What would be the benefits of Poland pursuing wind energy generation?*

AS: The main arguments supporting development of wind energy in Poland are the questions related to environmental protection, reductions in CO₂ emissions, new revenue for the local authorities, and also a need to build new, renewable energy sources, that would replace the exploited, conventional power plants.

According to the Ernst&Young report „The influence of wind energy generation on economic growth in Poland” the onshore wind farms are currently the

cheapest renewable technology in terms of investment required for 1 MW of installed power. A statistical local authority, having wind farms on its territory, gains about 653 thousand zloty (ca. 155 thousand euro) of additional revenue. It also gains more cash on having been perceived as a „green” area – the pro-investment attitude can mean new investments in such a community, not only the ones related to energy generation.

BK: *Can you give us an example of regions, where good cooperation with local governments can be worth mentioning?*

AS: Lots of local authorities – especially the one that are situated far for the main tourist routes – think about building wind farms not because of the additional revenue, but also to upgrade the roads and energy grids, that are often in bad condition. For farmers and the owners of land

Black clouds over solar power



.....
Jerzy Niczyporuk

Photovoltaic power is in a dynamic development stage, owing it to discoveries and mass introduction of new technologies. New ideas increase the efficiency of changing the Sun's radiation energy to electricity.

The latest solutions combine monocrystal and polycrystal silicon technology. It assures high efficiency both in cloudy and sunny days. During cloudy days such a panel used dispersed ultraviolet radiation.

Increasing the number of trails of connection between panels also raises efficiency and decreases losses in cases of microfractures, damaging a panel and caused by pressure of construction elements, a chimney or trees. In a short time, the development of this technology will allow the improvement of profitability of photovoltaics so that it will run without subsidies and even might cause decreasing the market price of electricity.

The law of scale makes panels cheaper and cheaper. Currently a 250 Watt panel may be bought for as little as 160 Euro. This makes many countries support this growing pillar of sustainable development civilization.

Will Poland join this run? Will reduction of carbon dioxide emission happen during renewable or nuclear energetics?

The planned novelization of the renewable energy sources act by the Ministry of Commerce is blocking the development of civil photovoltaic energy – it is evidently shaped for large corporations. Instead of a clear offer for the society, it proposes an unclear, unpredictable auction system which did not work in the UK, nor in Italy or the Netherlands. It works in favor of large investors, practically eliminating small, roof-mounted investments of ordinary citizens. UK is withdrawing from it now.

A German system has proven to be right, subsidizing micro solar plants by contracting an average of twice larger price for solar power electricity than market price. Roofs of houses, production buildings and barn have now hundreds of thousands of power plants in a few years, many towns and villages are now energetically independent. Germany has now 10,000 times more installed solar power than Poland.

Over one hundred German citizens and a similar number of Danes have become shareholder of wind power plants. Participation in a cooperative society like this guarantees a dividend of 4% and the possibility to buy wind power at a lower price. Germans can now shut down their dangerous nuclear power plants. Closing non-exploited nuclear power plants causes great losses.

Poles cannot afford such mistakes. Last year we went on a research trip to make sure of that with our own eyes.

The Institute for Research and Development published YouTube movies. Panels on roofs were seen in almost every village – in some on every third house or barn. We visited self-sufficient ecological farms. On the entrance to the barn there was a counter showing currently produced power. Even on a cloudy day it showed a surplus, sold to the network. The investment gave returns in four years. Is such law – profitable for citizens – possible in Poland?

On the Renewable Energy and Energy Effectivity Fair, I talked to companies introducing renewable energy sources to commence lobbying activity together. A lack of coordinated actions in this field causes great losses for Polish citizens – potential prosumers – and chokes the development of this branch.

Many journalists, members of parliament, politicians gladly listen to good arguments. But who will take care of this?

The Polish Photovoltaic Society on the fair was represented by a woman who, to my surprise, claimed that the “heart of modern, completely safe Canadian nuclear power plant (a reactor) can be packed to a suitcase and it does not radiate at all”. The schools and universities were sent propaganda materials by the nuclear lobby this year.

The council of the Gniewino community recently agreed to the invitation to build a nuclear power plant over the Żarnowiec lake and strives to execute the project of connecting the lake to the sea with a canal which will destroy the unique ecosystem of the Piaśnica river. Even there, the information actions are launched by a few detached people.

A lack of a stable, long-term policy of development of renewable energy sources is a consequence of apathy, disbelief and reluctance to the possibility of cooperation in public life, it is an expression of the underdevelopment of civic society. If such sick situations take place, major changes are needed in Poland. It is necessary to engage people into politics who understand this. The power of objection will rely on the engagement of activists, sympathizers and lobbyists.

Nobody will do that for us.

Next year, it is supposed to be better

Currently, every citizen may launch a micro power plant up

to 40 kilowatts, claim the need to replace the energy meter to a two-way meter and sell electricity for 80% of the previous year's price. This makes producing energy at a level of 70%-80% of one's own consumption profitable. In the day the surplus is sold to the network and in the night it is bought back, unfortunately at a larger price.

Paying 200 PLN on a bill per month makes the following solution most profitable: placing 8 panels of a total power of 2 kilowatts. The cost of such an installation is about 15 thousand PLN and yield returns after ten years. With subsidies from the Voivodeship's or the National Fund of Environmental Protection of 50% – **will pay back in only 5 years.** Information about the subsidies for 2014 will be declared in November or December.

Would it not be easier to, as in Germany, contract a needed amount of electric energy by setting a price crucial to launch this? With no applications for subsidies?

The larger the renewable energy contracted price is, the more people will decide to build larger installations selling electricity to the network. The priority for micro power plants will allow more people to take advantage from panels on their roofs – it will reinforce ordinary citizens – prosumers – our middle class.

How to call forcing more expensive, more dangerous, thriftless solutions?

Local communities are a chance for climate issues in Poland



foto: CC-BY-SA by Krzysztof

uld be on an advanced level. This lack of offshore wind energy generation – despite good natural conditions – is mainly due to regulatory and economic barriers, which result in lack of appropriate profitability of the investment projects.

According to the newest Ernst&Young report about offshore, reaching 6 GW of power from the offshore wind farms by 2025 would mean 73.8 billion złoty (ca. 17.5 billion euro) of added value to the Polish economy, out of which 14.9 billion złoty (ca. 3.5 billion euro) would be the direct profit to the public sector. The key to making this scenario happen in to create long-term, stable and predictable conditions for the investors for them to invest.

The Polish government is slowing down the support for renewables. However at the local level it is becoming more and more obvious that disbursed energy production offers a chance to keep capital in Poland instead of exporting it abroad in exchange for energy resources.

Making ends meet

The most important rule of the proper management of one's money is not to exceed one's budget – otherwise we get indebted. This rule can be obeyed not only by individuals but also in case of the trade balance of political entities ruling a given territory. If on a given territory the capital in use is growing – prosperity is being created. If it shrinks – people get poorer.

In a majority of Polish local communities making use of energy from fossil fuels results in the reduction of financial resources available. It happens so because in most cases fuels and/or energy have to be bought from entities situated outside. Local authorities, local business and citizens alike have to spend a lot of money on goods produced by companies situated in other parts of the country or even abroad. As much as 99% of oil, over 70% of natural gas and almost 15% of coal are imported to Poland.

Savings pay off

Numerous Polish local authorities have noticed that the outflow of local financial resources can be

halted or even reversed. Bielsko-Biała and neighbouring local communities, Częstochowa and Bydgoszcz – all are very active in improving energy efficiency. Due to investments in thermomodernization, energy saving home appliances (white goods) and bulbs as well as in education aimed at making inhabitants more aware of energy efficiency issues, year after year the cost of maintaining public buildings and infrastructure is getting lower and the money thus saved can be used for example to finance medical services or schools. The commune of Kisielice in the northeast of Poland is a good example of the development towards energy self-sufficiency. The local authorities get income from local energy businesses and allow the inhabitants to use heat from the local energy plant using biomass so that they do not have to buy fuels not produced on the territory of Kisielice.

Others already follow suit - 35 Polish local authorities belong to Covenant of Mayors of the European Union. In 2013 alone as many as 6 local authorities have joined this organization. Among them (or among those about to join Covenant of Mayors) you can find municipalities in which for many years large coal businesses have been seated: Jaworzno, Dąbrowa Górnicza, Konin. It is possible that also the so-called powiats, i.e. the higher level of local government

in Poland, will join the Covenant. As many as 115 of them (one third of the total number) participate in the project “Dobry klimat dla powiatów” (“Good climate for powiats”). Out of them 22 have already declared readiness to reduce the emission of greenhouse gases by 20% (against the 2005 level).

A large fishing rod

The most active local authorities can count on having access to a large sum of money from the EU in years 2014-2020. As much as 12.5 bln Euro (almost 68 bln PLN) will be earmarked for financing renewable sources of energy, improving energy efficiency or creating small scale cogeneration installations. These financial resources can also be used to support activities associated with adapting to climate changes (crisis management services, for example). The budget for such activities will be several times bigger than in years 2007-2013. In order to make use of this opportunity it is necessary to start intensive preparatory works right now.

A recipe for success

What is the recipe for a financial success as well as being successful in climate issues at the level of local authorities after the year 2014?

1. It is necessary to make a **plan of environmental protection** which should constitute a part of

strategic documents prepared by the local authorities

2. The goal should be to make various local authorities **collaborate** on single projects and to combine various sources of financial support
3. The **process must be monitored continually** in order to prove that projects implemented do have positive impact on the reduction of the emission of greenhouse gases
4. The **goals should be ambitious** so that they should be relevant from the point of view of the aims of EU energy and climate policy
5. It is necessary to **create new ideas** which would change the economy in a sustainable way by pushing it towards low emission standards.

It has happened on numerous occasions that activities undertaken at local levels have influenced mainstream politics. It is time to use local resources of energy so that most needs could be fulfilled at the local level while the capital could cumulate in our purses. This was the original aim of implementing the reforms strengthening self-government in local communities in Poland. Renewable energy and civil activity are our assets. It is time to act!

Wojciech Szymalski, PhD

Institut na rzecz Ekorozwoju, (The Institute for Sustainable Development), Warszawa

The Karoo is not for s(h)ale!

Fracking Developments in South Africa



Stefan Kaufmann

The American fracking hype has triggered shale gas exploration in many parts of the world, not only in Poland. Very often, and just like in Poland, this is built on empty promises, faulty science and sketchy resources. In the semi-desert, called the Karoo of South Africa, technical cooperation permits have been granted for preliminary field work on approx. 350.000 square kilometers, more than the size of Poland, just to four companies, half of it to the Dutch-British Royal Dutch Shell Inc. Chevron Inc. is on board too as a partner to Canadian FALCON Oil & Gas Ltd. Civil society activists managed to force a moratorium on exploration. This freeze has not been lifted in the meantime, pending clear regulations. No licenses have been granted yet, no fracking takes place. Scientists fear that fracking may contaminate the already scarce ground water and also ask where all that fracking water actually could come from in this already water-stressed part of South Africa. A novel coalition of white land owners and black emerging farmers is mounting a promising challenge to this threat to their livelihood and prepares for alternative development plans.

If you believe the global oil & gas industry rhetoric on shale gas in South Africa, there should be a feeling of gold rush in South Africa's Karoo by now. Hundreds of thousands of jobs created, new boom towns springing up. Finally, this poor backwater at the Southern tip of the African continent would bloom and provide the nation with cheap and abundant clean energy. But far from it.

Geologists had always known that the vast sedimentary basin of the Karoo could hold large volumes of oil and gas. An ambitious drilling programme in the 1960s, designed to break the world's boycott of the cruel apartheid system, failed miserably. A few wells sputtered gas for a few hours – and then died down. The Karoo gas sits in tight shales that do not release their content easily. The boreholes were plugged and forgotten.

Fast forward to the present day American shale gas revolution. With horizontal drilling and borehole hydraulic fracturing suddenly such unconventional gas reserves became more accessible. American geologists calculated some whopping 17 trillion cubic meters of natural gas, the world's fifth-largest shale-gas resources apparently. It is said to be able "to power South Africa for four centuries." The ability to develop that much gas could mean as many as 700,000 new jobs created, according to a Johannesburg-based research group, Econometrix. Quickly, many multinational companies, like Shell, Chevron and Chesapeake, staked their claims in the Karoo for shale gas exploration, on areas nearly the size of Poland.

As usual, there was little consultation with land owners and local governments. When they saw

company cars roaming the Karoo, many heard fracking for the first time. Fracking? That was not in the Karoo vocabulary then. Now, the oil & gas companies had to invite them for consultation. What they heard didn't convince them at all. The farmers were concerned. Where would all the water come from, when their own animals suffered in this water-stressed semi-desert? And wouldn't their scarce groundwater resources be contaminated? Just like in Gasland, the eye-opening movie by Josh Fox, they woke up to the prospect of flammable drinking water. The earlier wells are still leaking methane up to this day.

The farmers did the clever thing: They sent a small delegation to the US to see for themselves and to speak to their American counterparts. These two sturdy Karoo farm land owners came back – shocked. They told a tale of sick animals, torn communities and scorched lands. The Karoo is farmland and nature, more than anything else. The powerful farmers' lobby asked the nation's experts for details. Their lawyer's discovered that there are serious flaws in the legal process. Local and national civil society groups got in and informed people about fracking. Young emerging black farmers realized the threat to their livelihood. After centuries of apartheid, their new farms may not produce as planned. The fear of damage to the environment, of contamination of groundwater, the dust and noise from heavy trucking in undisturbed places, bring black and white landowners together in an unlike coalition. South Africa's cabinet placed a moratorium in April 2011 on oil and gas exploration licenses and production in the semi-arid land. This moratorium is still in place today.

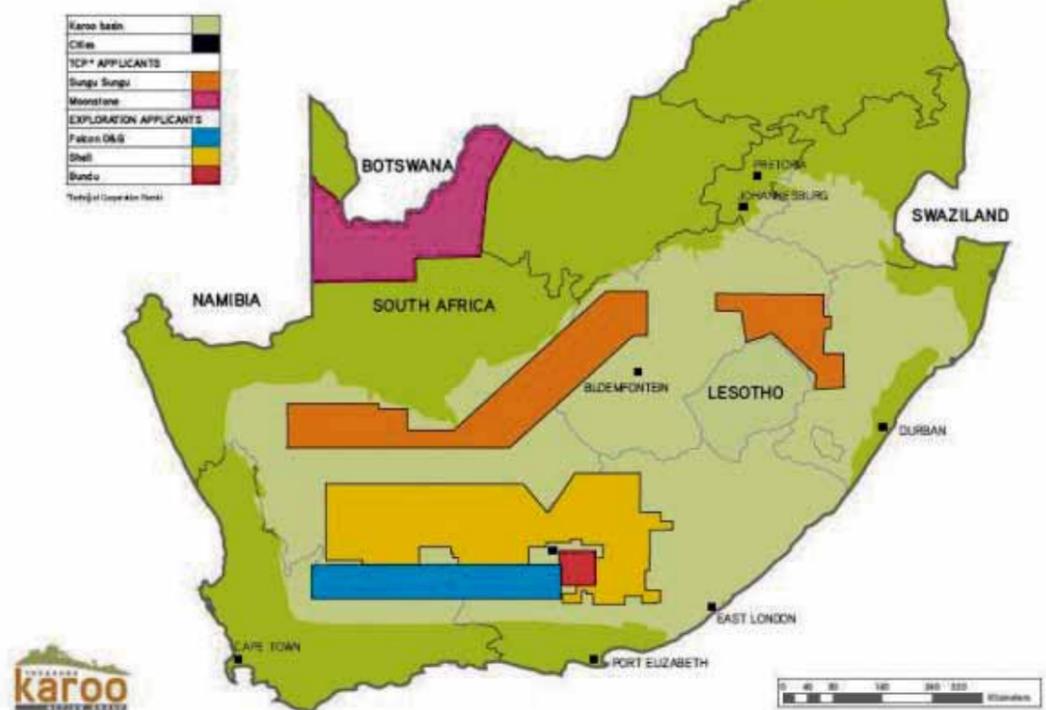
In the meantime, government realized that there were not even appropriate legislation and relevant technical guidelines for gas exploration in place. Thus, on 23 August 2013, the Minister of Water Affairs suggested that all water uses in relation to fracking should be controlled by her Ministry. On 15 October 2013 the Minister of Mineral Resources then proposed Technical Regulations for Petroleum Exploration and Exploitation. Until these regulations are in place and legally binding, no gas exploration can legally take place. Civil society is currently busy commenting these guidelines. Some have threatened to take the government even to court. But perhaps even more damaging on the prospects of shale gas development is the announcement by the ANC-led government that it intends to take 20 % free of charge of all oil & gas ventures and may buy up to 50 % of shares at market rates if it wishes so. Such economic conditions make it highly unlikely that the gas industry, which is already losing money through fracking in the US, will actually start a new industry in the remote Karoo. Here production is much more expensive, because the entire infrastructure of roads, pipelines, etc. would have to be built from scratch, while huge uncertainties remain whether there is even sufficient economically recoverable

shale gas at all.

Every shale gas basin is different. But the Karoo is even more unique in comparison with all other places where shale gas exploration takes place. It was way back in the Early Jurassic times, some 183 million years ago, that large volumes of magma intruded into the Karoo basin and created a wide network of volcanic rocks that heated the Karoo shales. Today the Karoo is still riddled with these dolerites. Much of the shale gas existing at that time was then emitted into the Jurassic atmosphere, creating a massive global warming event of approx. 6° C, which led to a global mass extinction of life on earth in the Early Jurassic. It shouldn't happen again that the Karoo leads to massive global warming.



Applications for shale gas exploration



Former Mobil VP Warns of Fracking and Climate Change...

Few people can explain gas and oil drilling with as much authority as Louis W. Allstadt. As an executive vice president of Mobil oil, he ran the company's exploration and production operations in the western hemisphere before he retired in 2000. In 31 years with the company he also was in charge of its marketing and refining in Japan, and managed its worldwide supply, trading and transportation operations. Just before retiring, he oversaw Mobil's side of its merger with Exxon, creating the world's largest corporation.

Louis Allstadt: The fracking that's going on right now is the real wake-up call on just what extreme lengths are required to pull oil or gas out of the ground now that most of the conventional reservoirs have been exploited - at least those that are easy to access.

Ellen Cantarow: So could you describe the dangers of this industry?

LA: First of all you have to look at what is conventional oil and gas. That was pretty much anything that was produced until around 2000. It's basically a process of drilling down through a cap rock, an impervious rock that has trapped oil and gas beneath it - sometimes only gas. If it's oil, there's always gas with it. And once you're into that reservoir - which is really not a void, it's porous rock - the natural pressure of the gas will push up the gas and oil. Typically you'll have a well that will keep going 20, 30 years before you have to do something to boost the production through a secondary recovery mechanism. That conventional process is basically what was used from the earliest wells in Pennsylvania through most of the offshore production that exists now, that started in the shallow water in the Gulf of Mexico and gradually moved down into deeper and deeper water.

Now what's happened is that the prospect of finding more of those conventional reservoirs, particularly on land and in the places that have been heavily explored like the US and Europe and the Middle East just is very, very small. And the companies have pretty much acknowledged that. All of them talk about the need to go to either non-conventional shale or tight sand drilling or to go into deeper and deeper waters or to go into really hostile Arctic regions and possibly Antarctic regions.

Both the horizontal drilling and fracturing have been around for a long time. The industry will tell you this over and over again - they've been around for 60 years, things like that. That is correct. What's different is the volume of fracking fluids and the volume of flow-back that occurs in these wells. It is 50 to 100 times more than what was used in the conventional wells.

The other [difference] is that the rock above the target zone is not necessarily impervious the way it was in the conventional wells. The industry will tell you that the mile or two between the zone that's

being fracked is not going to let anything come up.

But there are already cases where the methane gas has made it up into the aquifers and atmosphere. Sometimes through old well bores, sometimes through natural fissures in the rock. What we don't know is just how much gas is going to come up over time. It's a point most people haven't gotten. It's not just what's happening today. We're opening up channels for the gas to creep up to the surface and into the atmosphere. And methane is a much more potent greenhouse gas in the short term - less than 100 years - than carbon.

EC: Was there any major turning point that started you thinking about methane migration?

LA: There were many. An example is that one of the appendices of the draft SGEIS [New York Department of Environmental Conservation guidelines for the gas industry] that was issued in July 2011, had a section describing an EPA study of the only cases where similar fractures had been unearthed. These were in a coal-mining area. The EPA investigation indicated that the fractures had progressed in unexpected patterns and at greater lengths than expected. In September, when the draft SGEIS was eventually put out for comment, that section had been expunged.

EC: That's shocking! I know a lot has been discovered about the collusion between New York's DEC and the industry. Is this one big example?

LA: Yes, it is. To ignore the only direct evidence of fractures, or to remove it from public information, indicates that the industry was trying to hide something. The other point is that in terms of a turning point (in my thinking), here is evidence that the fractures go further and in patterns that

were not expected. It showed that fractures could allow methane to reach drinking water aquifers or the atmosphere.

EC: Maybe you could talk a little about what you did at Mobil. You were in charge ...

LA: I was in charge of the US and Latin America.

EC: In charge of exploration?

LA: Mostly production. There wasn't a whole lot of exploration going on in this area.

EC: How long did you do that?

LA: I got into this toward the end of my career. I started in logistics and then moved into marketing and refining. I was in Japan and Singapore for a total of 12 years, ended up running Mobil's operations in Japan, which was their biggest [marketing and refining] operation outside the US. And then I came back to headquarters in the US to head up the logistics area. And after that, Mobil did a major reorganization and put me over in an exploration-producing job. When the merger with Exxon came along, I was in charge of implementing the merger from the Mobil side.

I retired with no intention of doing anything in the oil or gas industries. [But] about the time we bought this house and started restoration, people that knew I had been in the oil business started saying, what do you think about fracking? I had not been following it at all, and said, 'What do you mean?' 'They said, 'They're talking about maybe drilling gas wells 100 or 150 feet from the lake.' That's where it started. I started looking into it, realized what the new process was, and looked at the New York State regulations, and at that point they were just starting to draft the first version of the SGEIS, and they were just horrible. They didn't make sense even for conven-

tional drilling, most of them, they were so weak.

A Canadian drilling company started drilling nearby, and that got people's attention. ... And then they started doing some seismic testing in the town of Middlefield. When the seismic took place, [it] spurred a grass-roots anti-fracking group to form almost overnight. It was mostly women. They started going to the town board. I own property in the town, so I went over, talked some. Another nearby town, Otsego, asked me to be on their gas advisory committee. So I did that. Once a month we'd get together. There were some pro-drillers on it, some anti. When it came to the town meetings the town halls hardly ever had anybody come unless they needed a stop sign or some issue like that. And all of a sudden there was standing room only. And it just kind of kept building.

Those two Town Boards pretty quickly realized that they had to do something and started thinking about how they could zone it out [using zoning regulations to ban the industry from town limits, a strategy that has since been remarkably successful.

EC: So to go back to your earlier comments, what are the future consequences?

LA: 20, 30, 100 years down the road we don't know how much methane is going to be making its way up. And if you do hundreds of thousands of wells, there's a good chance you're going to have a lot of methane coming up, exacerbating global warming. ...

What you [also] don't know [is that] when you plug that well, how much is going to find its way to the surface without going up the well bore. And there are lots of good indications that plugging the well doesn't really work long-term. There's still some pressure

down there even though it's not enough pressure to be commercially produced. And sooner or later the steel casing there is going to rust out, and the cement sooner or later is going to crumble. We may have better cements now, we may have slightly better techniques of packing the cement and mud into the well bore to close it up, but even if nothing comes up through the fissures in the rock layers above, where it was fracked, those well bores will deteriorate over time.

EC: So what's the solution?

LA: I think we have wasted a lot of time that should have gone into seriously looking into and developing alternative energies. And we need to stop wasting that time and get going on it. But the difficult part is that the industry talks about, well, this is a bridge fuel [that] will carry us until alternatives [are developed] but nobody is building them. It's not a bridge unless you build the foundations for a bridge on the other side, and nobody's building it.

EC: You've been on both sides now - promoting fossil fuel development for your whole life until your retirement and now trying to fight fracking. Do you think the anti-fracking movement and other environmental movements are the main hope now?

LA: I think the main question is how fast can these movements educate enough people about the dangers of fracking and its impact on global warming. It will take masses of people demanding action from politicians to offset the huge amount of money that the industry is using to influence lawmakers, a world-scale version of those standing-room-only town meetings. Something has to wake up the general public. It will either be education from the environmental movements or some kind of climate disaster that no one can ignore.

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The full version of the interview: <http://truth-out.org/news/item/17605-former-mobil-vp-warns-of-fracking-and-climate-change>



Fracking versus Coal – the wrong debate

Stefan Kramer PhD

Governments around the world support unconventional natural gas developments from shales (“fracking”) with one convincing argument. It reduces our dependency on coal and thus helps protecting the planet against harmful climate change. Natural gas is cleaner than coal and emits less greenhouse gases when burnt. But is this true? Facts are: nobody knows, reliable data don’t exist and, we will not know until in a few years’ time. In the meantime, only in the US is gas replacing coal, whose abundant coal supplies are shipped elsewhere, where it in turn is replacing gas! But the whole debate is misleading. Both coal and gas are just prolonging our dependency on fossil fuels and delay the urgently required switch to renewable sources of energy. Even if gas would be cleaner than coal, it should remain in the ground if we really want to survive on this planet. Scientists at the Intergovernmental Panel on Climate Change (IPCC) just told us last week. The earlier we do this switch, the cheaper. Shale gas is just prolonging the agony of a fossil-fuel-dependent world.

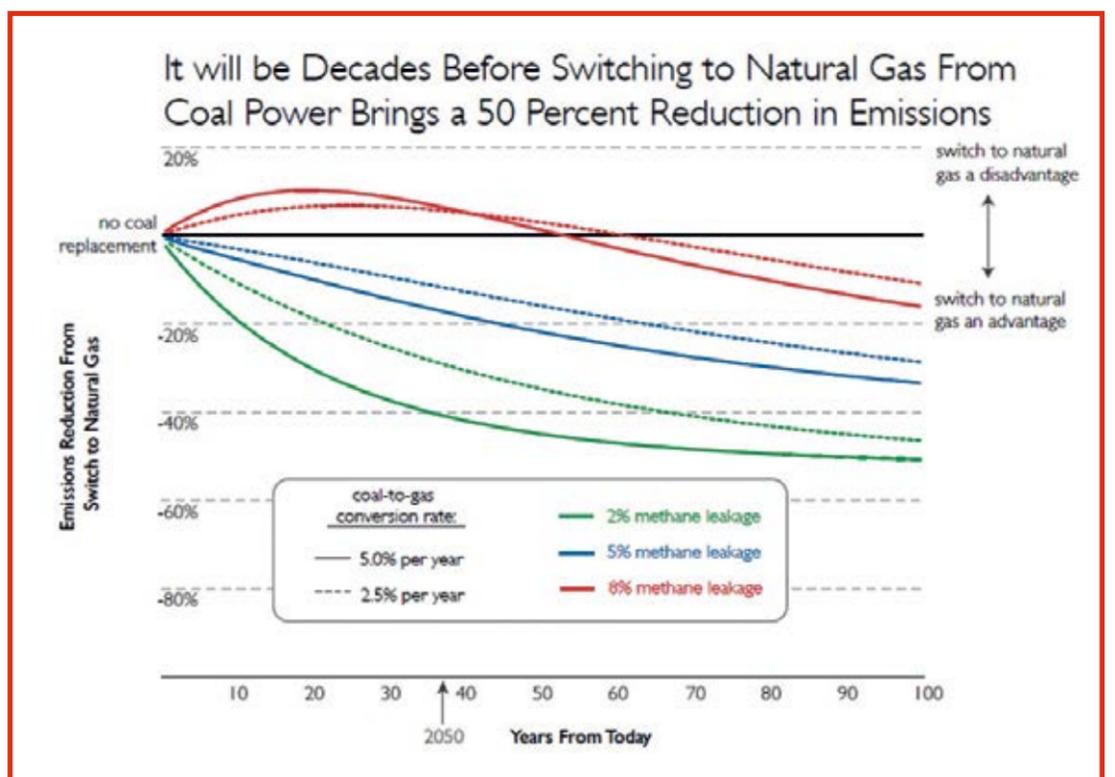
It all sounded too good. Thanks to natural gas from shales, Poland could finally get away from the 75 million tons of coal it rips out of the ground every year, 80% of which go to electrical power plants. This emits a staggering 200 million tons of carbon dioxide into Europe’s atmosphere, generating roughly 40% of all coal-generated electricity in Europe! The international oil & gas indu-

stry claims with shale gas it could half this figure of greenhouse gas emissions over time.

But is it true?

In principle, yes, but only in principle. Unfortunately, reality differs tremendously from it. Because there is one fundamental difference between coal and gas – and everyone knows it. Coal is a hard, solid material. It will not escape into atmosphere unless it is burnt. In contrast, methane, the main component of natural gas, is volatile, lighter than air and escapes into the environment wherever it can. Any fine crack, porous material or loose fitting and it easily disappears into thin air. That’s why you don’t smoke in refineries or near a gas pipeline, after all, it is explosive. While we can’t see or smell methane, it plays particular havoc with our atmosphere. Over 100 years – the usual timeframe for greenhouse gas emissions calculations – it is 25 to 30 times more damaging than carbon dioxide. On a shorter timeframe of 20 years, it is actually up to 100 times as damaging. And that’s what matters. If we can’t fix our atmospheric emissions within the next 20 years, hard and damaging climate change will be upon us.

But how much of this volatile gas is actually escaping? Nobody knows and numerous studies so far have been based either on embellished industry figures or on very wide assumptions. Actual measurements (at a basin level) have indicated that probably more than 5% of all methane leaks away at the production side. But then methane is piped, refined, stored, compressed and delivered to power stations and other final consumers. At all points, small amounts do escape.



Many pipeline materials, in particular older house fittings from cast iron, leak methane. It can add up to 10% of all methane produced before reaching the consumer. At this rate, even coal beats shale gas in terms of greenhouse gas emissions. New studies show that it

would take methane 50 years to only break even with coal in terms of greenhouse gas emissions at a leakage rate as low as 2%.

So, how do we know what is true and whom to believe? The regulatory authorities all over the place

have not been helpful – and none has conducted an in-depth survey so far. Industry-funded studies by various universities have produced improbable low leakage rates, 0.42% at the latest study by the University of Texas. In contrast, the National Oceanic and Atmospheric Administration (NOAA) scientists were shocked to find levels of methane in the middle of western Colorado deserts indicating up to 12% of all methane escaping. It is only now that a complete set of studies is being commissioned.

It will be well into 2014 and beyond until some type of scientific consensus may emerge. In the meantime, there is every reason to mistrust industry boasting of low emission rates. The Environmental Protection Agency (EPA) requires all new well heads – starting from 2015 – to have zero emissions. But what about the hundreds of thousands of wells already drilled worldwide? In addition, no one is regulating cumulative emissions from pipelines and distribution networks at present.

Will shale gas come to our climate’s rescue as its proponents want us to believe? We don’t know the full picture. However, there is every reason to believe that it can hardly match the industry hype. In the meantime, we should refuse to allow a massive experiment with uncertain outcomes to risk our planet.





Women and climate: whose commons?

Global warming is framed as the tragedy of the commons.

This metaphor refers to an article by Garrett Hardin (1968) who used the example of the pasture where herdsmen – kept on increasing the numbers of their animals until the pasture was overgrazed – in order to argue the tragedy is inevitable. Hardin concluded that only population control and privatisation will save the commons. He did not take into account that private property (such as mining corporations or industrial food production) as well as state property can lead to the destruction of nature, too.

Hardin's main preoccupation was how to prevent population growth and "overbreeding". He proposed to suspend the food aid to Africa "to teach them a lesson in demographics".

The underlying assumptions of "the tragedy of the commons" metaphor generated critique, including the recent Nobel prize winner, Elinor Oström. Drawing on field research Oström investigated institutional arrangements by which local communities govern their commons (common property resources). Oström did not, however, take into account the influence of external conditions, such as structural adjustment programs, the development policies of a country, or violence of enclosures.

In 1992 the Earth Summit introduced the concept of global ecology and global commons, supported by the image of a blue planet suspended in space which we all are

compelled to protect. Global managers of the commons framed Amazon rainforests as "our commons" and as the green lungs of the Earth. At the same time, the Canadian, American or Siberian old growth forests cut to satisfy the voracious saw mills of production, consumption and profit generation were not seen as the global commons, but as private or state property. As Ariel Salleh writes, this approach justified the expulsions of local communities from their commons and livelihoods.

While atmosphere was conceptualized as global commons climate politics gave it a market form. Now nature has to be privatized - in order to save it. In fact, this is about opening new possibilities of investment and capital expansion. Similar processes have been taking place in social policy (e.g. financialisation of pensions and the transfer of people's savings to financial markets).

This year, Oström's book, "Governing the Commons, Institutions for Collective Action" was published in Polish with an introduction by Leszek Balcerowicz. This executor of the Polish shock therapy reforms used Oström's work on the commons to argue for fit and lean state which withdraws from the responsibility for social reproduction and environmental protection and throws it back on local communities while the state works for capital and becomes an investor in itself.

The metaphor of climate as commons is used to mobilize emotions and to disguise the shift of the responsibility for climate

change to individuals and the so-called end-user or taxpayer. Investors or companies are to make profits on trading in emissions or privatising nature as "ecosystem services" and from subsidies and tax rebates for investments in energy efficiency or renewables. Let us look at the logo of COP 19 and its justification by Polish environment minister, who calls on individuals to save energy while aligning with big business in privatizing the atmosphere.

Commons from a feminist perspective

Commons are all sorts of resources which allow people to reproduce as social beings. These include the natural environment, languages, cultures, common institutions and laws and material infrastructure created by human beings. Common ownership of these goods does not rely on a strict, legal definition but on particular resources being a basis of livelihoods, a product of the common work of many people as they use them as a community as a whole (countryside, district, city, country planet). They are not simply "capital", but something that creates relations.

Since human life ultimately depends on nature (air, water, soil and the whole biosphere), commons are a form of relations between people and nature. The way we use and distribute natural resources shapes everyday life, the future of our planet and all of us. Man is not "Lord" of nature. Nature and human beings depend on each other. Ariel Sal-

leh writes about meta-industrial work, that is care work, and the work it takes to maintain regenerative capacities of nature, that is mostly done by women from indigenous communities, whose work contributes to „storing“ CO2 and protecting the climate.

Sylvia Federici or Ana Isla argue that commons include both nature and reproductive work. In a country like Poland this work is still organised around public institutions of health care, education, social protection and relies mostly on unpaid care work in the households. Caring for children, or for the elderly depends on the availability and access to public goods. Taking health as commons we mean healthy food, water and air, medical knowledge and access to clinics, hospitals, security of income, adequate housing, and possibilities to rest and restore the body. Similarly, it is hard to imagine nowadays caring of and raising children without access to such institutions as kindergartens, nurseries and schools. The role of social reproduction is key to understand the strong commitment of women in defending the commons. The access to commons (including nature) determines social conditions of care work which rests mostly on their shoulders.

We must defend the commons

It is not worth defending the climate policies of the richest countries and corporations which privatise nature. There are big stakes in defending the commons in

the contexts of reclaiming rights and conditions for reproduction of daily life. The destruction of the commons always means destruction of community. Silvia Federici argues that destroying the commons is characteristic for capitalist processes of primitive accumulation which expropriate people, enclose the commons, and transform them into commodities. With these processes ecosystems are transformed into measurable and monetized property, everyday human activity into labour force and capital, and social trust is transformed into money and credit. The ongoing division and individualisation of work enhanced control over people while creating social inequalities and invisibilizing exploitation of nature.

The commons offer a perspective to view history as processes that create communities which build social relations with nature. From this perspective the struggle of local communities against soil and water pollution e.g. by excavating shale gas (in Poland in Żurawłów, in USA in Dakota) should be connected with other initiatives such as defending public kindergartens, schools or libraries in small towns, protests against privatising hospitals, against taking away human rights (e.g. to pension or health care), for the freedom of Internet, in defence of the rights of workers and tenants, and many others

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(mm-ech)

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Computers: embodied energy and work

The mainstream debate on climate change meticulously avoids to discuss economic causes of global warming, including the relation between the accumulation of carbon in the atmosphere and the accumulation of capital. It does not see the climate from the perspective of people, too.

Instead, it promotes juridico-financial instruments, such as rights to pollute and emissions trading markets, and relies on new technologies.

Computerisation is thought to be one of the "magic solutions" to the climate crisis. But the role of new technologies in expanding and globalising production that increases the demand for resources and energy, including the transportation of products from distant production sites to consumers, is not taken into account.

Demand for energy is increasing with e-banking and e-state including the energy consumed by se-

ervers required for massive surveillance of citizens and foreigners in order to control them. No wonder the energy consumption related to computerisation and telecommunication steadily grows. As recent analyses show it is now reaching 14.7% of global electricity consumption.

Every computer and every mobile phone embodies energy which has been used to extract raw materials, produce the device, distribute it, use it, and then either store it as waste or recycle it. The concept of embodied energy was proposed by ecological economist Robert Constanza in the 1970s. Since then many research institutes and NGOs calculated the ecological footprint of computers – their demand for energy and raw materials

The researchers and activists point to other costs such as health damage as well as lost means of livelihoods. These costs are borne by local communities in eve-

ry place where raw materials are being extracted (such as the case of coltan wars in the Democratic Republic of the Congo), the electronic devices are being produced and used, as in Poland for example, and in places where recycling of toxic electronic waste is performed, as in rural areas of South-East China.

These costs include the loss of ability to work and to provide for the family, pollution of the drinking water and contamination of the soil to produce food for local market and domestic use, health damage due to exhausting work and increase the burden placed mostly on the shoulders of women, who are responsible for care and reproduction of daily life. Every electronic device not only contains embodied energy, but also embodied work, including reproductive work performed mostly by women

Women are present on both sides of production chain. Some are investment bankers or senior corporate managers, but there are many more who work in electronic industry assembly plants across the world. They are low-paid, work in hazardous conditions, sometimes 16 hours per day. The research carried out Feminist Think Tank in the LG special economic zone near Wrocław, in the South West of Poland made visible how extracting energy from people and nature are interconnected. The Chinese-Taiwanese compa-



fot. M. Maciejewska

ny Chung Hong (which supplies main boards to LG) is exempt from income tax, and real estate and land taxes, obtains subsidies to labor costs, and benefits from preferential energy prices for industry. Women who work in electronic smog are constantly forced to produce more and faster for minimal wages (that are subject to taxation) (They are employed on temporary contracts or via job agencies, with hardly any social security entitlements while their labor rights are violated.

The example of computerisation demonstrates that new technologies are not a "magical solution". Fundamental changes in production, distribution and consumption patterns are required, in order to minimize pressures on nature and labour. But this cannot be done without institutional changes so that human livelihoods and regeneration of nature are put at the heart of climate policies. Without systemic changes there is no way to stop climate change.

Conference of the Polluters?

Feminist critique of climate politics



"Who is more committed to tackling climate change than us?", asks Marcin Korolec, Polish minister of the environment. In an interview for BusinessGreen of July 2013 he cites an example of the biggest wood biomass plantation in Europe (the project of two American corporations, International Paper and GreenWood Resources). Until now, Paper International was buying timber from Polish Forests. Not only forests are on fire. The project will lease 10 000 hectare land from local farmers. Green jobs (the flagship project of green economy) in food production will be lost to create green jobs in industrial biomass plantation, ostensibly with the goal to reduce dependence on coal and emissions of greenhouse gases to the atmosphere and replace it with renewables, and move to low emissions economy. These are the proclaimed goals of climate policies. The implementation of these policies is based on three kinds of free gifts or rewards to companies, including the biggest polluters to encourage them to reduce emissions.

The first pillar of these policies are direct subsidies, non-returnable grants, and tax exemptions. In the new financial perspective 20 % of EU budget is to be allocated for "climate mainstreaming". Public funding to stabilize the climate will create new markets. The second type of free gifts to the biggest polluters of the atmosphere are permits to pollute up to an agreed upon cap, and credits to help them meet the cap. If the company's CO₂ emissions exceeded the cap, then it has to buy permits from others who have achieved reductions of emissions. So far the polluters have been getting permits to pollute for free. In addition to permits, the emitters get tradeable certificates for energy efficiency, cogeneration, and renewables.

The system is based on the faith in market equilibrium, and on the economic theory of the right to pollute which assumes that competition on pollution permits market will lead to the optimization of the costs of dealing with pollution, and eventually will lead to reduction of discharges to the environment. It looks great in theory but so much the worse for reality.

From a legal point of view the permits and eco-certificates are cor-

porate property rights. Effectively, they are the rights to the air we breathe. To make profits on polluting the atmosphere and also on saving the climate is the corporate dream come true. This is precisely what new climate policy, including European Emissions Trading Scheme, described above, offers to corporations since 2005.

"The questions as who profits from polluting and „saving“ the atmosphere, and who pays for both, are not asked

To make it easier for states and corporations to meet the caps on pollution, Kyoto protocol (1997) introduced the system of credits, or offsets in climate jargon, such as Clean Development Mechanism, and its spin-off programs. To explain how it works: a polluter from the US or the Netherlands can acquire land for instance in Tanzania, plant eucalyptus trees, and use it as an offset against pollutions in the country of origin. This enables them to meet the caps, refrain from reducing emissions, continue business as usual and make extra profit on trading credits and permits. (On the social costs of these arrangements see Ana Isla on selling sex and oxygen in Costa Rica.). As the authors of the Carbon Watch report point out, thanks to the offset system European Union can meet 2020 emission reduction targets without taking any action in member countries.

The third type of advantages to corporations, banks and financial firms are the markets to trade in pollution permits created with the visible hand of state and international organizations. For the second ETS phase (2008-2012) Point Carbon and WWF estimated the revenue of energy corporations was in the range from 23 to 73 bn euro. The emissions permits and other eco-certification schemes open up new lucrative possibilities for material profits from virtual products.

Let's take the example of Dalkia Łódź that has recently obtained emissions permits in return for inve-

stment in the modernization of the distribution infrastructure at 6 streets in Łódź. The costs of investment, as well as the estimated costs of eco-certificates are included in the end users energy bills, while the company profits in multiple ways: reducing delivery costs, minimizing its tax base, enhancing its assets, and generating profits from creative accounting. Eventually Dalkia can also generate new sizable income from trading in permits (rights to pollute) that it has received for free. Therefore it is not surprising that Dalkia, as well as many other companies covered under EU ETS scheme and the organizations that represent them, including Polish Confederation of Private Employers Leviathan or GreenEffort Group and similar organizations worldwide develop media campaigns and play the game of a good and a bad cop to ensure the sustainability of these arrangements.

To make the new markets in trading emissions permits possible, a huge new public-private climate change industry emerged. This includes experts in management of environmental resources, economists, lawyers, accountants, experts in financial engineering, bankers, experts in emission trading and eco-certification who calculate, valorize and verify emissions and offsets, and create, certify, account and trade new

"Hardly anybody wants to see „the emperor without his clothes“. The critique of policies that privatize nature is not taken on board, and neither is the critique of neoliberalization of social policy

virtual products. The production and trade in permits and eco-certificates opens up new possibilities to speculate on nature. For financial markets, water, air, and biodiversity appear as a new frontier, „a nobody's land" to develop for profit, this time by way of new financial engineering. The Boell foundation

report (Verolme et al, 2013) concludes that climate politics has been captured by the financial-energy complex.

The EU ETS will continue with the snow ball effect until it is melted down by the global warming - unless „a reset of climate policy" takes place. The discourse of global and Polish decision makers, including Polish environment minister Korolec, indicates that such a reset will indeed take place. However, what they have in mind is not necessarily ETS reform or its abandonment, but the globalization of emission trading.

Polish climate politics: economic nationalism and globalization of emission trading

In Poland, the decision makers would not have been bothered with environmental policy if not for the requirements to conform with the EU Directives and if not for the funding that flows from the EU budget for environmental investment. In 1992, at the Earth Summit in Rio, Polish minister for the environment explained that Poland has to get rich first and only then it will take care of the environment. This is still the position of decision makers today.

After the crisis of 2008, the inflow of foreign investment dried up and Polish government modified the national development strategy launched in 2009 with the goal for Poland to become a world leading economic power by 2030. With the change of plans, the previous rhetoric of harmonizing climate and energy policies by way of investment in new technologies for extraction and combustion of coal, in renewables, energy efficiency and in nuclear energy went into political disuse.

In the National Plan for Transition to Low Emissions Economy of 2011, protection of the environment has been framed as maximizing environmental utility. In the national development strategy modified by the government in 2013, energy security was redefined as „provision of optimal volume of energy at the lowest possible costs and diversification of sources". "The future of Poland and Europe depends on coal", said prime minister Donald Tusk at his

party convention this year. "We will spend on the renewable only what's necessary to protect the environment and ensure proper energy mix, but nothing more. We will not pull wool over people's eyes that windmills and solar batteries can ensure future energy supply for Poland... Our energy sources will be Polish energy sources that will ensure Polish energy independence for many years to come". Polish energy sources include coal, gas, shale gas (the new El Dorado) and nuclear energy with a new fad, local nuclear power plants for cogeneration of energy and heat. This statement by Donald Tusk comes in the context of revival of national security discourse in Poland that provides a common frame for different segments of the political elite which has been governing the neverending neoliberal transformation. (There is still a lot to privatize...) In the national security framework, energy security was linked with demographic security (the increase in the fertility of Polish women), as well as military and economic security.

Politicians of the governing coalition are playing a piece for two hands. In an interview of July this year, minister for the economy, Janusz Piechociński, calls for renegotiating the Climate Pact to modify the indicators for the new EU member states. He is supported by Polish energy and heavy industry. And the media underscore that Polish economy will pay a steep price for climate change policy. However, in the second ETS phase Poland has earned 800 million zlotys from the so called hot air (reduction of emissions which were not due to material efficiency gains, but to the downturn in economic growth and hence lower emissions). Energy firms based in Poland will be granted rights to pollute for free in big installations until 2019, while in the „old EU", starting from 2013, free distribution of permits will be phased out and replaced with the auction system. These relative gains are not taken into account in public debate. But the interventions are useful to maximize the scope for negotiation with the Commission.

In turn, the minister for the environment is engaged in the critique of differential global allocation of responsibilities for mitigating climate change. (In Kyoto only developed countries committed themselves to reduce emission volumes by 6 %). Therefore, he is calling for a new global climate pact. But in the background of such statements are the World Bank projects that introduce new institutional arrangements that pave way for globalizing trade in pollution permits (EU ETS model).

NGOs in the market framework of climate politics

The majority of Polish NGOs is either evangelizing the climate policies forged in Kyoto and Brussels in the frame of „bad" Polish government and coal industry versus „good" EU climate policy (Climate Coalition) - or find a niche in promoting renewable energy. The NGOs such as the Green Institute or the Spaces for Dialogue Foundation engage in the production of lyrical narratives on green city, energy democracy, or depleted new green deal. The documents occasionally refer to neoliberalism, but the way they conceptualize responses to neoliberalism always draws on the very set of concepts that they claim to criticize, such as creative capital, education referenced to Europe 2020 strategy, which entails marketization of teaching and research in the name of enhancing competitiveness. They demand flexicu-

rity, internalize reframing of social rights as services, or advocate eco-innovation as the solution to capitalist exploitation of workers and nature in the otherwise postmodern critique of capitalism.

These reports envisage photovoltaics at every rooftop of the green city of their dreams, but they do not see people who cannot afford to install the new green gadgets. There is a call for reconciling work with family roles and to share care work in the households. But there are no women who seek cleaning jobs in other women's homes for meager remuneration. 40% of all Polish households that live from hand to mouth on income that does not allow to meet basic needs are excluded from the green city.

“ But in the background of such statements are the World Bank projects that introduce new institutional arrangements that pave way for globalizing trade in pollution permits

The same national security frames are reproduced through academic discourse on climate change which includes descriptive presentations of policy process or is evangelizing EU ETS. For instance, in the legal interpretation of Polish emission trading law, dr Leszek Karski is presenting the techno-fiscal-juridical instrument of emission trading as exemplary case of global human rights law, one that serves humanity and social development, guarantees realization of human rights of current and future generations. The author finds emission trading scheme will deliver world peace, because it allocates a part of atmosphere to business in a peaceful manner, and hence prevents global wars over resources. No doubt this rhetoric will come useful to legitimate the establishment of global market for emission trading.

To conclude, Polish debate on climate follows the repertoire from Kyoto and Brussels (new technologies, renewables, cap and trade). Hardly anybody wants to see „the emperor without his clothes”. The critique of policies that privatize nature is not taken on board, and neither is the critique of neoliberalization of social policy. The questions as who profits from polluting and „saving” the atmosphere, and who pays for both, are not asked.

In all EU countries, energy providers have two price lists, one with higher prices for households, and the second one with lower prices for firms. In Poland, households pay for energy almost twice as much as firms (see www.energy.eu). This pricing arrangement is secured by the Office for Regulation of Energy which legislates that the end user should pay for the protection of the environment. Households pay for energy costs embodied in products and services, too. However, unlike any other public discourse in Poland, climate policy has generated an avalanche of reports and statements by politicians, domestic and international think tanks, and corporations, expressing concern about consequences

of climate policies for low income households. This caring image is useful to disguise who benefits and who pays for marketized climate policy.

A new narrative

The Heinrich Boell Foundation report assessing the state of climate policy calls for a reset and a new narrative. This call is addressed to NGOs. In Poland, one of the conditions of the possibility for a new narrative on climate to emerge is the deconstruction of neoliberal normativity, in its many faces (left and conservative), and at different points of deployment, in social, environmental education, health, communal policies at the same time.

What we call climate is a multiplicity of (class based, gendered, racialized) relations between people and the air we breathe that are increasingly mediated by the relations of capital. If it is possible to delineate the visible horizon for a new emancipatory political project, then the dream should translate into the project of building new commons as the project of becoming. The bricks for such project are shared frameworks of sense, knowledge resources, as well as networks of relations among social movements engaged in struggles over workers rights, in defence of rights of human beings and nature, women's rights, in social-ecological conflicts, or within struggles related to the care economy (which includes relations with nature). The new narrative that integrates nature and care and accepts them as commons, can only come through building relations in struggle. Taking the perspective of reproduction of daily life, people need nature and nurture to live, and institutions that will sustain social relations of mutuality. To live people need means to reproduce their own daily life and their dependents. All means of livelihood, even those perceived as immaterial labour, are mediated through relations with nature.

“ All means of livelihood, even those perceived as immaterial labour, are mediated through relations with nature

In modern European cultures, the duty to care was allocated to women. Reproductive work, whether carried out at home or for the state or market, was unremunerated or low paid. Emotional and material reproductive work constitutes the foundation of state and market – as well as the foundation of the commons. Without it the state would not have its taxpayers, the firms their workers and consumers. Beginning from the 1980s., at a different pace and with local specificities, in all countries of Europe care economy was being marketized. Health care, education, pensions, housing, cities and the state have been transformed to function accordingly to the logic of the market, analogically to the climate policies described above. Likewise, the market expansion transformed the internet commons. The new narrative cannot focus on climate policy as such, it has to connect different struggles where the main political stake is our life.

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Selling sex and oxygen in Costa Rica



Flickr.com by G. Carrillo

In the article with the meaningful title „Who pays for the Kyoto protocol? Selling oxygen and sex in Costa Rica” Ana Isla gives consideration to the trap created by the rich North, more precisely by the elite of eco-managers, for poor people of the Global South under the pretext of caring for nature.

Concerned with the reduction of the greenhouse effect, the global managers of the environment grasped an idea that the reduction of emissions itself has a value that is economically measurable. It is possible to issue permits for emissions, and even to trade them. It is not far from this to the proposal that some people could buy emissions from others. Instead of investing in reducing CO2 rich countries and companies from Global North can buy certificates from those who pollute less.

Next, the theory of „carbon sinks” emerged, i.e. containers absorbing CO2. The South American rainforests could play such a role. And so it happened. Rainforests were recognised as having a global value and states that controlled them then enabled the access of global corporations or turned them into reserves, administered from the outside.

Seemingly, everything is OK. When we watch carefully with Ana Isla, though, what has happened for example in Costa Rica, we discover that we are cheated once more: the profits from turning nature into ecosystem services have been captured by a few beneficiaries at the cost of the exploitation of the more numerous local populations.

In politics, the big owners matter and not the little ones. The administration of the rainforests prefer and reward large landholdings. The people who owned nothing or small farmers who rented cottages (ranchos) have been transformed into the inhabitants of the slums (tugurios).

The rainforest became a company in itself, where trees are planted and logged in order to make profits – with disastrous effects for the ecosystem. But who cares? Growing there foreign species and then selling them generates profit, does it not? Capitalist transformation of the natural resources into market goods on the one hand, and patriarchal domination over the environment on the other, hit local communities simultaneously.

Oxygen is sold to the rich North while expropriating it from inhabitants of the poorer South without giving them compensation or alternative sources of income. From the world where they farmed traditionally, with their livelihoods

based on nature and the care work of women, they were exiled into a world where nothing else matters but money.

The evictions have placed Costa Rican women on the margin of the world economy. The women ensure the survival of their families. When the only rule is buy and sell, women have to trade their bodies, as they have nothing more to sell. Their clients come from the countries where the headquarters of the institutions co-responsible for the Costa Rican debt are located.

What is especially striking is that not only the state and patriarchal capitalism is responsible but the ecologists as well and their powerful northern non-governmental organisations contributing to the exploitation of the local people. Domination of the creditors over the debtors is accompanied by the domination over women. The exploitation takes the form of trafficking of human beings – women and children. The profit from this trafficking, Ana Isla accuses, goes to the creditors. Costa Rican debt to banks is similar to the debt of women owe their pimps.

This argument should be sufficient to revise critically the concept and practice of making the the rainforests into CO2 sinks and the oxygen factories for the North, as well as the idea of “trading” natural resources as ecosystem services which serves in fact the practice of neocolonial exploitation.

There are other facts that prove the illusory profits of oxygen trade. The companies that operate in the rainforest areas do not in the least preserve this piece of nature, separated from its traditional inhabitants, in its pristine state; though maybe one could say that this would legitimate the “human costs” of these investments. Producing profits, they extract the raw materials from the earth, exploit the resources of biodiversity, replace traditional species with the more “economical” ones. This can result, in spite of the noble slogans, in the destruction of the rainforests on behalf of profit – the only value they serve. (id)

(Ana Isla. 'Who pays for the Kyoto Protocol? http://www.gift-economy.com/womenand/womenand_tragedy.html Selling Oxygen and Selling Sex in Costa Rica, w: Eco – Sufficiency and Global Justice. Women write political ecology', red. Ariel Salleh, London; New York, NY: Pluto Press, 2009) In English also here: http://www.gift-economy.com/womenand/womenand_tragedy.html

National Stadium: Raising the Temperature

The 19th Climate Summit will take place at the Warsaw National Stadium. The slogan of the Polish presidency of the COP19 is 'I care' (about the climate). The Euro Championship 2012, for which the National Stadium was erected, also had its 'green' slogan: 'Play green – EURO 2012'

In both cases the government's intention was to mobilize individual sense of responsibility for the environment and the climate. In the case of the European Championship the appeal was targeted to the football fans: keep the streets clean and use public transport. In the case of the COP19 the government seems to be saying that the change begins with each one of us: everyone should save energy and recycle. The emphasis on individual responsibility is invisibilizing real social-environmental and economic costs of the construction of the National Stadium and other spectacular investments.

The construction of the stadium required the input of resources, work and capital. All of these could have been invested in ways which would improve living conditions and would not harm the environment. The stadium is a massive electric installation which consumes the energy of a town of 7,000 inhabitants. The stadium turf needs to be permanently heated. At the same time, Eurostat data shows that 13.6% of Poles cannot afford adequate heating. Prior to the construction of the PGE Arena in Gdańsk, 30 hectares

of allotments that people use for recreation and to grow their own vegetables were destroyed. The same thing happened in Poznań.

The construction was publicly funded, including the transfers from European taxpayers (via EU budget). The city of Warsaw went further into debt. The consequences of this will be felt by residents of Warsaw. The total cost of the Stadium – PLN 2.5 billion (ca. EUR 600 million) is two and a half times more than Warsaw's annual social spending. Its yearly maintenance cost, PLN 42 million, would be enough to build 12 public day care centers. Before the construction began, the largest marketplace in Poland had to be closed, leaving more than 4,500 sellers without a job or forcing them to seek less attractive locations. And those were not the only social costs of construction.

In 2011 a fatal accident took place on the stadium construction site. One of the workers fell 30 meters from the roof of the stadium. It was one of four fatal accidents during the construction of the Championship stadiums; all of the casualties were caused by neglecting safety regulations. When stadium was under construction, over a dozen workers' strikes took place, all of which were caused by wage arrears or lowering of the hourly rate. After the championship all these issues were swept under the carpet.

The social cost of the stadium's construction before Euro 2012 ge-



fot. K. Pawlik

nerated resistance. The campaign 'Bread, not Games' addressed the pressing issues of growing municipal debt, eviction of residents and exploitation. A Feminist Think Tank report entitled 'Why we got Games instead of Bread' explains that the dark side of the stadium's construction involves extracting value from the city, spinning up economic growth, and the intensification of surveillance. All these serve to protect the profits of the elites at the expense of the majority of the population.

The construction of the stadiums put many municipalities in debt and has been an excuse for further austerity measures; cuts have been

made on most basic levels. In all four cities where stadiums were erected public transport fares went up and the number of connections were cut. In Wrocław during the time of the construction, council housing rents went up, and funding for council housing declined. In Poznań, nursery workers heard that there would be no pay increase because of the Euro Championship. When the preparations were coming to an end, Warsaw authorities began a systematic campaign to close school cafeterias

The slogan of the Polish presidency: 'I care' is a hypocritical camouflage of local and national policies which have been shifting the responsibilities for care and

reproduction of daily life to households. The cost of damaging the environment are transferred to citizens as taxpayers or as their individual responsibility which is largely shouldered by women. The story of the National Stadium is therefore a part of a larger picture. The energy embodied in such spectacular investments will not bring any universal benefits. The principle of promoting economic growth, maximising profits for business, branding cities and countries for financial markets are put above the wellbeing of people and their environment. The same is true of climate policy.

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(gm)

Climate: A view from waste bins

Our great-grandfathers and grandmothers did not have rubbish. Clothes were worn intergenerationally, when they wore out – they would be patched, turned into children's clothes, or used as cleaning cloths. Food was not thrown out, ashes were spread in gardens. Things were used by generations and they would last longer, as they were not mass-produced.

The market, telling you to buy a new car or a new sweater each and every season, had not yet been born. Subsequently, everything went easy – too many things in circulation, mass-production that by definition has to produce impermanent things, free carrier bags and every product wrapped up in three layers of plastic, paper and whatnot. Before the fashion for grandparents' furniture and hand-knitted socks kicked in, the rubbish bin problem emerged.

First they were simply there. Then they became overloaded. There were also the stinking shutes in tower blocks. Rubbish was dumped in the woods after waste collection was privatised. The idea that something should be done about it was addressed to the young generation. They would go home and tell Gran- nie, that plastic goes in here, and compost in there. And that they would perhaps think twice before littering the town with another can, box, carton, if they run around with a rubbish bag in the neighbourhood's greenery patch. Although it

was the elderly people who used to fold sugar bags and wash jam jars – they would get some loose change for those at the local recycling shop and the wastepaper was collected at schools.

Nowadays, with the over-production of waste, rubbish selection and education in the field are indispensable. The "Rubbish Act" is an absolute must, but its implementation caused strong resistance. Why?

The resistance and protest did not come out of nowhere, but were provoked by the authorities' imperial style of decision-making – even over rubbish. The irreverent style of communication ignoring the voice of the affected, or lack of communication whatsoever, were responsible for the protests and disagreements.

The authorities' discourse for years has been saying that "folks are ignorant and won't segregate". The authority orders, the folk submit. In the segregating collection containers around my house there are potato peels in a plastic bag, and empty bottles are in the general collection container – have the folk dissed the decree and spited the authorities? For as long as the selective collection is another tsar's decree, we will not submit even under the threat of penalties.

It is still worse with institutional segregation. Despite a drastic increase of fees, public institutions do not segregate rubbish. Wastepaper from the city administration goes to the compost bin, leaves from the pave-

ment removed by a contractor hired by the City Hall, go to the recycling bin. The citizens observe that the decree only affects the little people – the authorities are above the law. It is a clear message, that in reality it is not about selective collection, ecology, sustainable development or the quality of life in the city.

In Łódź an urban legend of rubbish trucks loading all the rubbish together was brought to light through a story by a local journalist. Wioletta Gnacikowska had asked about the fate of all the types of rubbish loaded onto one truck, and the answer she received was that it will be segregated on the landfill. The landfill for Bałuty (district in Łódź) is in Krośnice, the sorting plant in Kutno, and the composting plant, where the biological waste should go – in Łódź – she wrote in the local Łódź edition of *Gazeta Wyborcza* from 12th October. Is it worth driving rubbish 80 kms to Kutno, then to Krośnice another 16 kms, and nearly 100 kms back to Łódź's composting plant? – the journalist asks on behalf of citizens. And just like the citizens demanding an honest rubbish policy she does not receive any answer, apart from bureaucratic excuses from the company hired by the City Hall.

The "Rubbish Act" has more victims. The sudden change cut out some and let in others. Ex-employees of the communal cleaning service, who were pushed into self-employment by means of a previous reform – outsourcing of communal services – had to close down their businesses and fire their employees, and are now sitting on their private dump trucks with a bank loan attached. Among the economically-driven tenants there is a growing tendency to lock up rubbish storages in housing projects and reluctance to permit the



fot. I. Desperak

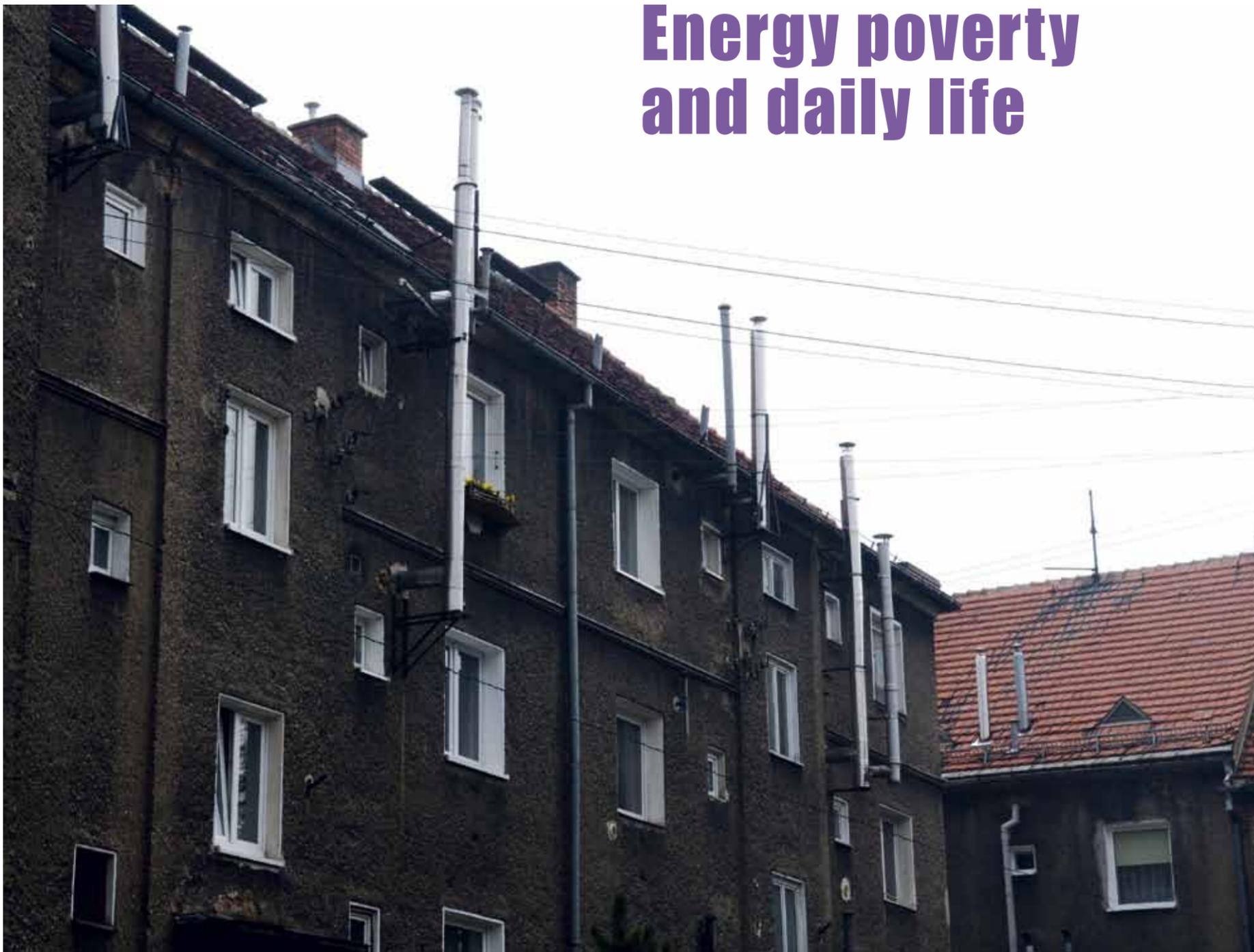
activities of the traditional segregation supplied, free of charge, by the so called dump divers.

The economisation of ecology serving the "Rubbish Act" struck painfully against social solidarity and traditional values, which did not allow waste but demanded sharing usable things with others. Together with the rubbish revolution disappeared furniture "displays", unruly containers for stale bread, cartons for commercial leaflets and old magazines as well as sacks of old, clean

clothes – that were useful for their users, and the "divers" who made their living off them. Now our junk is collected by companies which make money out of it, so they collect only what is usable for them. The traditional sharing with the needy was in tune with husbandry, transfer of goods appreciation of their use value, durability – which had nothing to do with the bottom line. They were annihilated along the way to economisation of rubbish.

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(id)

Energy poverty and daily life



Polish government is working on a so called anti-smog programme. The aim? Elimination of coal stoves as environment unfriendly method of heating. Authorities of Kraków and Wałbrzych are already implemented local anti-smog programs of their own. Fines for coal heating are on the agenda, too. How it will influence on people's life?

About 1.3 million households in Poland heat their homes using coal stoves, 4.5 million use stoves which work on solid fuel – usually coal (GUS 2012). 16.3% of households have problems with keeping proper temperature in the house, and 12.5% with paying heat bills (Eurostat). Because of hypothermia 167 people died on winter 2012/2013 in Poland. We decided to ask three women from Wrocław and Kraków about their experiences connected with coal heating and their opinion on the changes in law.

Kasia from Bielany, close to Wrocław, lives in a big, two-floor house, built in 1970, which has 200 square metres. Five people live in the house: her grandmother at the bottom, Kasia and her family at the top. Kasia is the only person who works there. Her mother and brother have only temporary jobs. An old coal stove is installed in the house. Electric heating is much more expensive.

– „Sometimes we can buy the coal in August, when it is cheaper”, says Kasia. „In August a tonne costs 700 zloty, which means it is cheap – now we pay 450 for half a tonne. But sometimes we haven't got the money then... The coal's price is increasing all the time. For the whole winter we need ca

1,5 tonne. Nevertheless, we suffer...

The stove is in the basement, where our family keeps the coal. The person who stokes the stove is Kasia's brother. – „If we want to do it in a proper way, we should stoke about five kilograms every three hours. In fact, we stoke when we can afford it. In winter, most of the time, it is cold in our house. My grandmother lives on the first floor. There is, you know, the basement and stove. Since she has been infirm, we have provided her with her own stove. It is so small that even when we haven't got money we can throw some wood and it is warm in her place”.

Gas heating is much more expensive than coal. Kasia and her family can't afford it. They don't have money to invest in gas stove to prepay the refund. – „We can't afford it. It is very difficult to pay for such a house. Everything is growing old, falling to ruins, there is no money to redecorate, renovate. My grandpa died a couple of years ago, there is no such landlord, who could care of it. Grandpa cared for all of the house, he could do home repairs, but now it is hard”.

Kasia's neighbors from the district of Bielany are in a similar situation. Most of them are old people, who stoke with coal or cheaper coal dust. – „These new houses which are being built in Bielany, you know - there is a lot of new real estates - they may be heated with gas or floor heating”.

Daria lives with two children in an old, hundred-years-old tenement house on Nadodrze. It didn't see the promised „revitalization”, like the most part of tenement houses in the district. It

has been sold with the occupants to a new owner, who wants to dispose of the occupants at any cost. They decided to take strike action. Her flat is located in the house's main annex, it has 44 m2 and 3.5m height. There are no more neighbors in any direction, and her flat is horribly cold. The tenant house hasn't been renovated or insulated, the windows haven't been exchanged. Daria heats her flat with electricity because she has no place to store coal or any other fuel because the new owner has blocked the storage place.

Only in one room there is a tiled stove for coal or wood. Until recently she stoked coal – earlier there was wood and briquette, but mainly wood. – „In the first winter we stoked with wood, normally, but second winter was heated with waste from some renovations from the other flat. Some floor boards old cabinets, windows, etc. It wasn't so cool because often this wood was with some lacquer or paint, and it stank a lot”.

She then stored the coal in the basement and it was very exhausting to bring it to the second floor. She bought coal on the market in Ptasia street. It is likely that it come from pits, illegally mined by poor people.

– „The lorries have been coming, which had four compartments and we bought one or two of them. We heated with electricity because the stove was leaking and I was so scared, although we had a sensor of carbon monoxide. Even though, we must have the wood for tinder. It is a lot of work to do, especially when you buy low quality

coal. Sometimes traders add stones to coal, in order to get the same weight. Then we bring out stones instead of ash. What is more, coal is very soiling, it stinks, and there is terrible mess around.

Neighbors upstairs have a small stove for wood, neighbors from the bottom have a fireplace. Another neighbor in front of us has tiled stove, one for two rooms which doesn't seem a good solution because warmth has been running away through the wall. Most of the people have to heat with coal because it is cheaper. Especially in this region. People heat their houses with whatever they have, unconsciously. The worst thing is that it is difficult to find a coal of really good quality, calorific, not stones”.

Maria lives with husband and two children in Kraków, in an old tenant house, which is the property of her parents.

– „We have always stoked stove. Yearly, we had to buy 1.5 tonne of coal. The heating took us one hour a day. We had to bring up the coal, clear the ash, load it, and stoke up. In March 2013, after the end of the heating season, we decided to demolish the tiled stove. Then the fungus had appeared. In 2010 the town helped out financially with the exchange of stoves and paid 2000 zlotys no matter what kind of stove was installed. In 2011 there was no subsidy. Now the town covered all the cost. It is based on competition rules, where the points are awarded depending on amount of stoves, and for localisation as well. There are more points for the centre of the town and for the more polluted districts. The clean districts don't get so many points. This year there were three calls for applications. First in

January, second in June. We didn't get the subsidy. The third tour had been announced in September and we heard we got the subsidy, but nobody called us about it yet.

The subsidy isn't available for everyone. First, there is a need to have money for funding the exchange of stoves, points, and luck in competition with others.

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(Ewa, an activist of Tenants' Action took part in carrying out the interviews)

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Feminist Think Tank is engaged with feminism as a new social critique. We undertake participatory research, policy analysis, and produce video-documentaries. The special insert to Green News was prepared by Ewa Charkiewicz, Iza Desperak, Goška Maciejewska, Marcin Marszałek and Anna Zachorowska. Visit us at www.ekologiasztuka.pl/think-tank.feministyczny. Recently we have opened a new online library – Political Ecology www.ekologiasztuka.pl/ekologia.ekonomia

Climate Package should be strengthened



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Rebeca Harms

I have been a member of the European Parliament in Brussels for close to ten years now, but what happened in July 2013 was a first: German Chancellor Angela Merkel stopped a compromise on CO2 emission limits for automobiles which had already been agreed between the President of the European Council, the European Parliament and the Commission by personally picking up the phone and asking other heads of government for their support in blocking the deal. An outrage! Apparently the interests of car makers like BMW are more important than climate protection

targets. Merkel's encroachment exposes the fact that the often-cited consensus on climate protection does not exist.

Back in 2008, the EU climate and energy package actually constituted a good start: The EU member states committed to a 20-percent reduction of CO2 emissions by 2020, increasing the share of renewables to 20 percent and lowering energy consumption by 20 percent. At the time, Angela Merkel spearheaded the initiative.

Of all things, the goal of emissions reduction is now beset by an utter lack of ambition, not only in the automotive industry or on the part of Angela Merkel. Today the EU has already come close to reaching its target for 2020 – not least due to the economic crisis.

I have attended many international climate conferences. The next major meeting will be held in Paris in 2015 and it has to be prepared in Warsaw. Now is the time to put increased pressure on the protagonists in Brussels and the member states to make these summits a success. The EU's 2020 climate protection target needs to be raised to at least 30 percent without delay, binding targets for 2030 must be agreed and a swift and comprehensive reform of the emissions trade implemented. This is our only chance of getting other states on board, of reaching an ambitious, binding international climate protection agreement by 2015 and still keeping global warming within the range of two degrees Celsius. The severe, recurring floods – which also wreak havoc along European rivers and streams in ever-shorter intervals – are but one indication of how urgently we need to act.

We need a European energy transition. We must gather new momentum to restructure the energy sector, we need to move away from the coal- and nuclear-based energy mix – throughout the EU.

Greater energy efficiency and the expansion of renewables hold great potential and opportunities which are by no means limited to the environment: We can make an affordable, reliable and environmentally sound energy supply for all EU citizens a reality. The European energy transition can

reinvigorate the economy. It can make us less dependent on Gazprom and oil sheiks. The energy transition can be a new rallying point for Europe, a project the entire union can identify with. I therefore propose a new energy pact – similar to the former European Coal and Steel Community which served as the foundation on which the European Union was built. The expansion of renewables, systematic energy conservation and exploiting the immense

efficiency potentials will not only bring innovation and jobs to the European economy and industry. They are significant steps on the way toward a sustainable economic system.

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<https://twitter.com/RebHarms>



Time to push the fossil lobby out of the UNFCCC!

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Satu Hassi

Climate science has provided policy makers a clear message since the late 1980s: increasing use of fossil fuels will lead to climate change that can become dangerous for human species. For several reasons political leaders have failed to take action. One of them is ferocious lobbying by the fossil industry. It has taken many forms, from the usual advocacy to funding massive misinformation campaigns about the scientific basis of climate science

The interventions from industry has been very one sided. Dynamic new, energy efficient and renewa-

bles companies tend to be busy innovating and selling their goods and services, so find less time to engage with energy or climate issues. This leaves the field wide open to out-dated industries that are dependent on cheap and dirty fossil energy. These old giants often dominate the industry associations and create a distorted message from the industry.

One example is the lobby group BusinessEurope, which despite representing thousands of businesses, through their national associations, lets its biggest and most powerful corporate members, such as Shell, BP and Rio Tinto, set the group's agenda. This has led it to lobby to block every chance of more effective or more ambitious EU climate and

energy policy.

Another example is the astonishing fossil sponsorship of COP19 by companies such as ArcelorMittal, Alstom, PGE, Lotos, BMW and General Motors. Unfortunately the companies who have most to gain from climate inaction have grabbed at the opportunity of special access and greater visibility as COP19 corporate partners. They all have commercial interests in (cheap) fossil fuels, and records of lobbying against effective climate action and emissions reductions.

The need to curtail the power of fossil lobby is highlighted by the fact that most of the fossil fuels need to be left under the ground to keep the climate safe within

the 2 C target. This was made clear a year ago by the International Energy Agency and restated by the Intergovernmental Panel on Climate Change in September.

To get global and national climate policy on track, something needs to be done about the excessive lobbying by vested industries. The UN World Health Organisation's Framework Convention on Tobacco Control (FCTC) provides important inspiration in this respect. It states that in setting public tobacco control policies, governments „shall act to protect these policies from commercial and other vested interests of the tobacco industry“. The guidelines to this piece of international law elaborate that, in practice, this means policy makers “should interact with the tobacco industry only when and to the extent strictly necessary to enable them to effectively regulate the tobacco industry and tobacco products” and that “where interactions with the tobacco industry are necessary, Parties should ensure that such interactions are conducted transparently”.

There is clear parallel between tobacco and fossil fuels: prolonged and extensive use is lethal. What underpins the FCTC is the scientific fact that there is no safe way of using tobacco. We know that there is no safe way of emitting greenhouse gases, from the burning of fossil fuels, into the atmosphere. In the case of tobacco we know that lifelong use kills one out of two. In the case of fossil fuels we know that increasing heat waves, floods and storms do, and will continue to, destroy the livelihoods of and kill many people. The rate may be slower and harder to see, but the impact of climate change will one day be dwarfing the impact of tobacco.



In October 2013 the European Parliament paid attention to the adverse role of fossil lobby in its climate resolution. It states that there is a „need to be vigilant concerning efforts by economic actors that emit significant amounts of greenhouse gases or benefit from burning fossil fuels, to undermine or subvert climate protection efforts“.

I could well imagine an article in the 2015 climate agreement that would put fossil industry an arms length away from climate-related policy making. To protect the integrity of climate negotiations and regulation at all levels, we should not allow the fossil industry to disturb the process. We should have the courage to say, as in the case of tobacco, that the fossil industry is doing such a remarkable harm to the society, that they need to be excluded from consultations in policy making. A welcome outcome of such article in the future protocol would be fossil industry-free climate negotiations in the future.

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Satu Hassi, Green member of the European Parliament from Finland



Renewables under pressure



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Agnieszka Grzybek

Continued from page 1

In the meantime – to avoid the threat of a lawsuit from the European Commission to the European Court of Justice in Luxembourg – a so-called “small three-pack” has been passed in July this year, which partly regulates the situation of renewables, but does not

create a durable basis for their development and is an insufficient instrument.

After much quarells a note has been introduced that made renewable micro instalations exempted from the requirement of obtaining a status of a business entity. Prosumer energy still faces an uphill struggle though.

The micro installations connected to the grid need to adhere to technical and exploitation requirements, that still need to be defined in the decree of one of the ministers.

Prosumer energy producers are also discriminated against in terms of prices. The guaranteed price of energy from micro instalations has been set at 80% of the medium price of energy from last year.

Ultimately – in the middle of September 2013 – the government released its “guidelines to the guidelines” of the future law.

To much amazement from all interested parties, the previous guidelines were thrown into the trash bin, and an ineffective auctioning system has been proposed. Only three countries in Europe have used such a scheme: Italy the Netherlands and the UK – this last country is ditching it after 10 years because of its inefficiency in generating new power.

The “guidelines to the guidelines” to the law on renewables show that the main issue is to make the system as cheap as possible for the state budget, and not to organise it in any sensible way. No real analysis has been made that would support cho-

osing this solution, and not any other one.

If we are to create a sensible energy policy for Poland, that would give us energy independence and security, then the pillar of such a strategy should be renewable energy.

We need to stop subsidising in a direct and indirect way (ie. per increased health costs) coal-based energy, resign from investing in nuclear, that is both economically ineffective and risky, and from extracting shale gas by fracking, that creates threats to the environment, water and health.

Money needs to be poured to the clean and green renewable energy sector by guaranteed feed-in tariffs for small and me-

dium producers for at least 20 years.

We need to guarantee affordable production of energy from renewables by the citizens, with the energy establishments having the duty to buy energy from them.

We also need to create incentives – be it by tax or other measures – to support the national producer, connected to the renewables sector.

Appropriate legislative and economic policies need to support the local systems of storing energy from green sources.

Such were the suggestions, that the Green Party sent in an open letter to Donald Tusk in October 2013. We even offered a free-of-charge help with work connected to the law on renewable energy. Without a change of heart of the government Poland will become a real fossil in terms of energy policy.

Climate Policy – a Threat or an Opportunity for Poland?

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Andrzej Kassenberg,
Institute for Sustainable
Development

Continuation or modernization.

Poland is at a turning point – the country is about to choose between two paths of development: an industrialized economy characterized with low innovativeness or a developed economy based on services and industry. The two paths of further development can be described as:

1. Continuation – i.e. slow adaptation to development challenges as well as slow reactions to worldwide trends;
2. Modernization – i.e. high quality of both public institutions and the law, creativity and innovativeness as well as effective use of human capital and natural resources.

Effectiveness – a low hanging fruit. Modernizing the economy means a substantial improvement of

the effectiveness of the usage of resources, especially energy resources. Until the year 2050 it is possible to triple the wealth of Polish society with a simultaneous drop of energy use. Main activities in this scenario comprise a thorough thermal modernization of existing buildings, the development of the passive construction industry, promotion of public communication and transport, tightening the existing norms of car fuel consumption. Such changes will allow to get ROI in a short time.

Energy – building a competitive edge. The Polish energy sector is backward and ineffective. Until the year 2050 it will be necessary to replace almost 100% of the production capacities of power generation plants. Thus it is necessary to develop renewable energy generation together with improving resource efficiency in order make our economy more competitive. In the last decade the world has seen a rapid development of alternative energy sources as well as ecological innovation. This has already led to a breakthrough. Solar and wind energy are becoming competitive to conventional technologies. These changes favor the

emergence of the so-called prosumer – a consumer and producer of energy at the same time, a person capable of producing energy not only for oneself, but also sells it to the network. An exponential drop of prices of renewable energy sources allows to assume that soon they will also fall in Poland.

Energy – giving up fossil fuels. The reduction of energy needs together with diversification of the mix will allow for a drop of imports of coal. It will be possible without new opencasts of lignite. Also, owing to more efficient transportation means, the import of oil in 2050 may be lower by 50% compared to the continuity scenario. This would lead to lowering the energy dependence of Poland in 2050 to 57% (compared to as much as 78% in the continuity scenario).

Costs and benefits.

The profit and loss account allows to understand that the realization of the goals of the climate policy will support Poland's development, bringing economical, ecological, health and social benefits. A conscious and long-term resistance

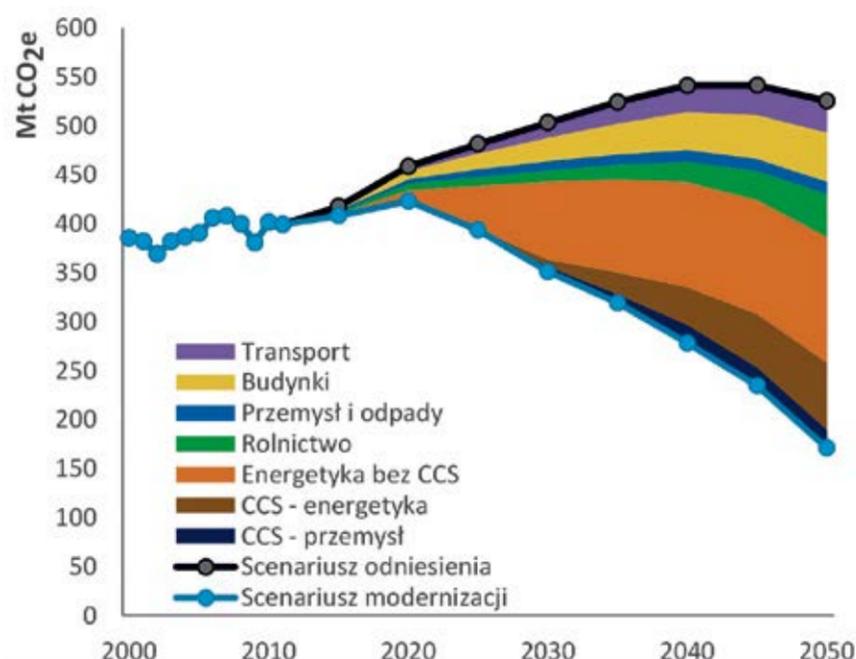
to low-emission transformation creates the risk of slowing the economy down. Maintaining competitiveness requires systematic and coordinated modernization actions. Implementing a packet of low-emission actions will contribute to raising the GDP on average by 0.5% in 2030 and by over 1% in 2050. Implementing a policy of reducing emissions would also become a stimulus for Polish innovativeness which would raise the year-average GDP in 2050 by a further 2.5% to a total of 3.5%. Improving energy efficiency of buildings and limiting fuel consumption of cars would substantially reduce energy

Expenditures – total energy and fuel expenditures in households could be lower by as much as 37%. In the same time, this will lead to limiting the negative impact of pollution on human health. If looked from this perspective, the cumulative balance reaches 24 billion Euro in 2030 and over 93 billion Euro in 2050. A low-emission transformation will also lead to limiting the emission of greenhouse gases by 63% compared to 1990 (reduction by 80% is also possible, however costly and difficult)

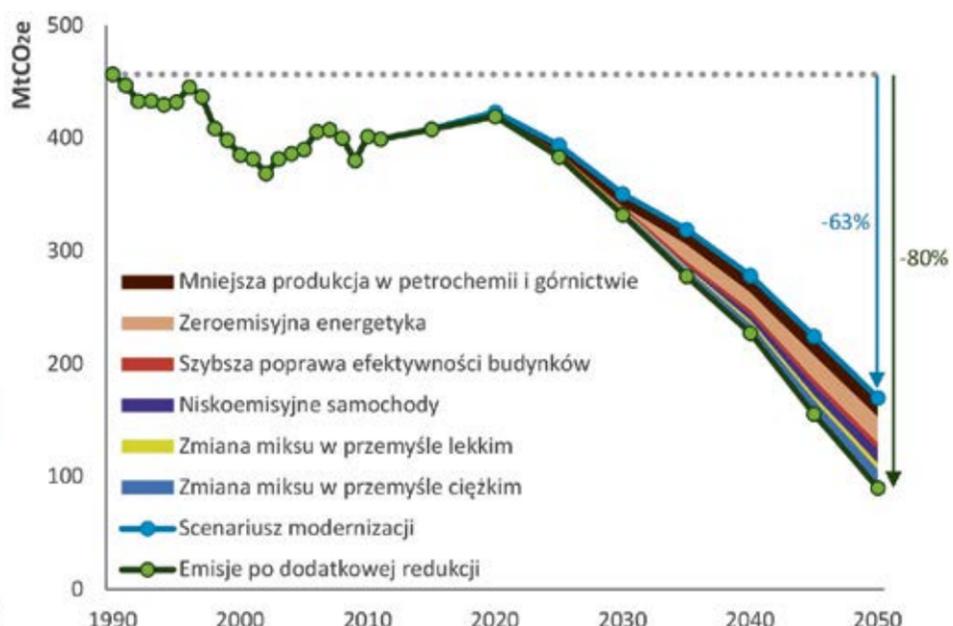
Summary.

Poland may become an innovative country with an economy based on highly specialized services as early as in the 2020-2025 period. However, there are no incentives which could lead to such a change. This role could be played by actions aimed at reducing greenhouse gas emissions and improving EU competitiveness together with its unfavorable energy balance. A properly shaped climate policy could change all aspects of social and economic life and build solid foundations for a modern, pro-ecological and highly developed Poland. Currently, the debate is dominated by skepticism and a conservative approach. It is overlooked that a low-emission transformation is a long-term strategy. Collaboration within the EU on devising such a transformation may help Poland to soften the negative effects of the transformation and select an optimal path of modernization for our country.

Greenhouse emissions until 2050



Source: 2050.pl, a journey toward a low-emission future. Edited by M. Bukowski. Institute for Structural Research, Institute for Eco-development and the European Climate Foundation, Warsaw 2013



I have a dream...

Radosław Gawlik

During the climate conference in Warsaw this autumn, the Polish government once more recognises that it has been isolated with its veto on climate law. The Prime Minister declares a change in domestic policy on energy issues. Poland no longer vetoes the climate policy of the European Union and is granted an additional 25 years for transforming the Polish carbon economy in return for accepting the European Union climate and energy package.

The Polish government returns to the negotiation of the renewable energy bill (OZE), which have now been going on for 2 years, while the administration, together with the most active NGOs, trade unions and energy producers, readily prepare the energy strategy for the country to 2050. The government and the Polish parliament accepts it.

The law on energy efficiency is also fundamentally changed. It is valid for an indefinite time and initiates mechanisms for saving different kinds of energy, with an emphasis put on the use of thermal energy.

"The National Program on Development of Micro-installations", that was prepared in 2013 by the Renewable Energy Institute and at the beginning was perceived as not feasible, finally brings the expected results.

The number of prosument, ie. those who installed their own OZE micro-installation increases from 230,000 in 2013 to 2.5 million in 2020. The development of the prosument micro-energy sector creates 54,000 workplaces and reduces CO2 emissions by 75 million tons between 2013 and 2020.

The scale of investment and innovation results in a reduction of energy costs of micro-installations from 10 to 50 per cent in 2020. Given the increase in the price of energy from fossil fuels, micro-in-

stallations are more competitive and a withdrawal from their subsidies is possible. The energy sector is now more democratised and competitive. Millions participate in the production and consumption of self-produced energy.

With the specifying of the schedule of the construction of new power plants and the disabling of the old ones, the coal market is stabilised. Waste dumps at Polish mines disappear. Energy import from Russia is decreasing.

This energy dependence on the Eastern neighbour is eliminated, which reinforces Poland's security. Mines can rationally plan and reduce coal extraction in conformity with guidelines for creating a low carbon economy.

The government is interested in reducing emissions and the use of energy in transportation – the second source of mass pollution, after the energy sector, which damages human health. The government promotes vehicles which use less fuel – hybrid and electric.

The country takes advantage of the large EU funds in 2014-2020 which are used to support public transportation and cycling in cities, as well as a long-distance fast railway network between all the major cities in Poland. It considerably reduces traffic – car drivers choose the faster and more comfortable public transportation.

The long-distance transportation of commodities is also being transferred to the railways. All these factors contribute to stopping and reversing a trend of increase in emissions caused by cars that was observed in the first years of the 21st century.

After less than 10 years, the overall result of the ongoing restructuring of the energy sector and the economy confirms that the agreement reached in Poland was a right thing. The investment in different kinds of energy sectors – with the preference for OZE and energy efficiency – are increasing, while greenhouse gas emission and other kinds of pollution are reduced. The external costs of



using fossil fuels become less burdensome for health, the economy and the environment.

The green economy and energy contributes to creating jobs. Trade with neighbouring countries, which are engaged in intensively developed innovation technologies, is increasing. Polish scientists gain new domains for dynamic development which is also based on multilateral international exchange. The unique Polish technologies are more frequently exported...

United we stand!

No climate justice without social justice

Natalie Eggermont Koen Verdegem

"The multiple crises the world is facing – energy, food, jobs, and climate - have common origins in a socially unjust, environmentally unsustainable and economically inefficient model incapable of providing decent work and decent lives to millions of people"

Over the last years millions of people have lost their jobs, health, families or even lives because of deeply rooted flaws in our economic system. The public sector workers in Greece and the farmers driven off their land by multinationals to grow biofuels are both victims of the same neo-liberal logic. But still their struggle remains ill-connected.

It is time to join forces, to bring climate and social movements under a single banner. The current official discourse during the UNFCCC, focusing on green growth and technological innovation, will benefit mostly the business sector and transnational elite while depletion of natural resources and human rights violations will continue. Only if we work together will we be able to counter the lobbying power of the corporate sector, hold our governments accountable and restore our democracies. The common roots of the economic and climate crisis call for an integrated approach to sustainable development where social progress, environmental protection and economic needs are brought into a framework of democratic governance, where labour and other human rights are respected.

We are united by our demands; our struggle is a joint struggle. Addressing the climate crisis offers opportunities for a low carbon, labour intensive economy. Trade unions and social movements should be actively involved in the fight against climate change so that the social and employment dimensions are fully addressed.

This year's Conference of the Parties, organised in Poland, is the place to move this debate forward. Poland is a country where syndical and ecological movements are often divided. The

Polish government does not have a good reputation when it comes to climate policy, and its role in the international negotiations has been far from positive. Enormous efforts were made to accommodate big business in this year's COP, while excluding civil society. In addition, the country envisions becoming the leading producer of shale gas in Europe.

We support the ecological movements in their call for a transition to renewable energy: no more coal-fired power plants, shale gas, lignite mines or nuclear energy.

But it is important to give due attention to the social aspects of this transition. We stand in solidarity with the Polish coal-mine workers, opposing the EU climate policy and defending their right to decent work. The ecological movements should not join in a call away from coal-fired power plants without involving the labour movement in this dialogue and offering an alternative for the millions of people working in the coal mines, who constitute the backbone of the Polish labour movement. As Adam Ostolski from the Green Party Zieloni rightly emphasized: "There was the struggle that gave us all voting rights, social insurance, work safety legislation and other labour regulations" [2]

This year's COP and the actions following in its wake can be a tipping point; they provide a window of opportunity to resolve the

tensions between different groups in civil society that are exploited by the establishment. While the Polish government is countering a global agreement that would force Poland to switch to renewable energy sources, we should unite in a joint struggle to turn the tide. On Saturday November 16th we will take the streets of Warsaw and march for justice. A chartered train from Brussels will bring hundreds of people to this march. The Belgian movement 'Climate and Social Justice' is leading the initiative and has brought together environmental, social and syndical groups to undertake the journey together.

History shows us that profound changes in society happen through citizen mobilisation and workers' struggle. Let us put this COP in Poland on the map together.



Sluggish implementation of UE law

The Interview with
Marcin Stoczkiewicz,
PhD, senior attorney of
the ClientEarth Poland
Foundation



“ZIELONE WIADOMOŚCI”: You prepared a special publication for COP 19 showing how the Polish government and parliament implement the EU law. Where did the idea come from?

Marcin Stoczkiewicz: ClientEarth Poland assembles lawyers involved in environmental protection. Currently, fighting for Earth and its climate does not only take place where forests are cut down or where rivers are polluted but also in offices of lawyers who are responsible for environmental protection law, sometimes also in courtrooms. We decided to look at what is now most important in legal-ecological cooperation between Poland the European Union which are the climate and energy directives.

ZW: No offence, but that does not sound too interesting.

MS: You are wrong. We are talking about an extremely important framework for every citizen of this country. Directives regulate many fields of life: the development of renewable energy sources, the eco-vehicles market, air pollution. Their full implementation can bring the effect of a constant reduction of greenhouse gas emissions. Disregarding those remote and seemingly boring regulations may prove to be very costly.

ZW: So what did your analysis show so far?

MS: The results are not very optimistic. Of 11 analyzed directives, only one (Directive 2001/92/UE regarding the evaluation of affecting the environment) was transposed to Polish law within its deadline. Other analyzed directives were transposed to Polish law with a large delay or the transposition process has not been finished. Two directives crucial from the point of view of climate protection were not transposed although the transposition deadlines have passed: the so-called second directive regarding emission authorization trade and transfer emission directive. Lacks in transpositions or an incorrect (incomplete) transposition caused lacks in practical implementation of 8 directives.

ZW: Where did these lacks, mistakes and faults come from? Where did the delays come from? What can they result in?

MS: We do not know a clear answer to the first question. A number of lawyers in different ministries is working on a transposition. They are educated, intelligent people. I have no idea why they make mi-

stakes. It is hard to believe that this is an intentional action. It is different for delays, I think that in this case it is simply the typically Polish “it will work out somehow”. We will delay, we will wait and see, maybe something changes. The government and the parliament do not to play an active role in the European climate policy, that is why they are doing a lot to block most solutions.

ZW: You mentioned that these mistakes may prove to be very costly. What does that mean?

MS: I will discuss this using the example of the renewable energy sources directive which eases the development of renewable energy sources in particular countries. The transposition deadline was the 5th December 2010 but it was introduced to Polish law with an almost three-year delay. On 21st March 2013 the European Committee filed a complaint against Poland to the European Union Court of Justice for “failing to fulfill the obligation of transposition”. The committee wants a penalty within which the daily installment for remaining without a transposition is 133,228.80 Euro, this means that every year without a transposition amounts to a penalty of around 205 million PLN. Delays with other directives may result in similar consequences. Delays with the CCS directive may be another example...

ZW: This is controversial even among ecologists. Let us remind that it regards thronging carbon dioxide produced ie. in power plants underground. Why do we need such law?

MS: Simply to be better prepared for the future. The CCS technology is actually in its development, but first the Polish government did not wish to implement the directive regulating its operation and then did it in such a way that makes its development practically impossible. CCS was devised mainly for countries like Poland, which is planning to leave heavy industry and a part of the energy mix based on coal. It is hard to find any logic in this.

ZW: What do you want to accomplish with your publication?

MS: We hope that it reaches people responsible for the Polish law. Pointing out mistakes is not our goal. We rather wish to show that such a multitude of them endangers the country’s functioning, not just in the scope of ecological solutions. Everybody bears the penalties in the form of ceasing EU’s subsidies. We cannot allow this. We are trying to persuade to a faster and, what is equally important, diligent implementing of European Union law. Instead of treating it as a threat, we should understand that it may be a chance for social change.

ZW: Are those words not to big?

MS: No. If every house owner could place a micro installation in the yard and produce electricity for his own needs, we would have a true, peaceful energy revolution.

Ecology, social justice and democracy

.....
Bartłomiej Kozek talks to **Richard Pereira**, former spokesperson of the Green Party of Canada on labour issues:.

BK: Stephen Harper’s Conservative government isn’t known for its attention to the environment and is being regularly criticised for lowering Canadian ambitions regarding climate protection. Could you tell our readers something more about this issue?

RP: Environmentalists and even mainstream citizens who want to see action on environmental issues and the Kyoto Protocol (the majority of Canadians) for example have been severely disappointed by this government and recognize its leadership position in the world in undermining international action on these issues. The aggressive support for the tar sands and other extremely polluting and wasteful projects (excessive water usage in tar sands oil production from Alberta is a major issue) by this government is contributing to local and global ecological catastrophe in a far disproportionate manner to the population of Canada.

BK: In what way is the lowering of social and environmental standards in Canada intertwined?

RP: The tar sands oil projects combined with use and abuse of the Temporary Foreign Worker Program (TFWP) in Alberta and elsewhere is merging to create both a toxic environmental and labour-social situation – the Alberta Federation of Labour has stated “We’re becoming the Dubai or Saudi Arabia of the North, not only because we have oil, but because we’re abandoning real immigration in favour of using an exploitative guest worker program to fill our most menial and undesirable jobs.” Skilled workers and jobs are also being displaced by the TFWP and driving down wages and labour conditions.

The degradation of labour conditions, regulations and enforcement I believe is a forerunner to environmental degradation in many ways, because when people lose their economic security they become desperate for almost any job, becoming less critical of environmentally or socially destructive work/jobs/companies which they now increasingly depend on for their financial survival. More and more Canadians are working longer hours,

more than one job, irregular shift-work (including night shift), unpaid hours/unpaid overtime, unpaid internships and do not have the economic security to resist the worst abuses of employers and increasingly powerful corporations. To address our ecological crisis we must simultaneously address this labour-social crisis comprehensively, providing basic economic security to citizens in this age of great productive and technological capacity.

BK: Is there any chance of some sort of electoral cooperation between the opposition parties – the Liberals, the New Democratic Party and the Greens – in ousting Harper from the government?

RP: With the political and environmental situation continually worsening cooperation would seem obvious, but it is not happening. Initiatives outside of party politics are trying to make cooperation and coalition happen to oust the neo-conservative government. LeadNow is one of them, started by youth international environmental campaigners. The Greens are always supporting efforts toward cooperation and proportional electoral representation, trying to steer away from the worst elements in the American and British electoral systems. An earlier ill-fated attempt at cooperation occurred in 2008 (not including the Greens who did not have representation in Parliament) after the election results were announced (instead of signalling cooperation to the public in advance of election day) and it was complicated by the inclusion of the separatist Quebec party in a poorly organized fashion, which the Harper Conservatives fully exploited and prevented.

The separatist party has since collapsed at the federal level, and what is required is for the Liberals, NDP and Greens to clearly announce cooperation (in at least select ridings/constituencies) well prior to the next election on several key issues such as environmental justice, poverty elimination, offshore tax havens-tax evasion, excessively low corporate taxation, income security, democratic reform. I personally would like to see many more independent MPs with no party affiliation who can truly speak to conscience without party discipline – democratic reforms are needed to enable this as well as the complete elimination of corporate lobbying/influence of government and political candidates. And more important than political candidates is the use of referendums on the most important issues to truly reflect the will of the citizenry on crucial matters.



Time to Trilateral Climate Commission



Continued from page 1

The trade unions have their reasons to be cautious about climate policies – we have regularly observed how the roller of modern-

isation viciously crushed human lives in our country – but should be even more cautious with hiding the head in the sand. Especially when the government, defending the „Polish coal”, has no plan B. There will eventually come a time when the emissions of greenhouse gases will be decreased. If we will have to do it urgently, without much needed infrastructure and strategy, we may end up with another shock therapy, which will make the reforms of Leszek Balcerowicz or Jerzy Buzek look like mild changes.

Ecological movements, trade unions and green business have a common interest in forcing the government to pursue a more responsible path. This may be the time to come together, sit at the same table and try to create together a scenario of transition,

that would be ecologically sustainable, economically feasible and socially just. The starting points of the discussion will probably be miles apart from one another – it is plain to see that „business is business” (even if it is a green one), the trade unionists will defend jobs and the ecologists will want polluting chimneys to be shut down as soon as possible. But if we see these obstacles it will be possible to break the gridlock and meet halfway.

Ecological NGOs face problems not only with the Polish government, but also the public opinion. We all love green energy, but when it comes to the discussion on a specific mine or power plant, the vision of an economy based on „Polish coal” becomes harder to let go of. The ecological awareness in Poland is not only

one of the lowest in Europe, but is also constantly declining. The green business is quite lonely amongst other employers – it is obvious that most other enterprises are interested in cheap energy without thinking about the external costs it may generate. Thinking about green energy as an investment in our future is not compatible with the short-term business cycle. It is the government that should see the importance of such actions, but it is failing in pursuing them. The ecologists and the green business would gain an important supporter, if they would hear out the labour movement.

Trade unionists need to choose if they want to defend the status quo in the energy market, that is impossible to retain in the long run, or maybe to guarantee a

better position of workers in the economy of the future. Only they can keep an eye on this transformation (by actively taking part in it), so that the ambitious climate policy will mean not only reductions in greenhouse gas emissions and new, advanced technologies, but also a just transition and defending workers rights.

Why is it so hard to undermine the current climate policies of the Polish government – even if they mean risking the long term security of Poles? The main problem is that it likes to portray its policies as „raison d’Etat”, that is supported by „everyone”. To change that perception we need not only the scattered voices of those, who already think about saving the climate. We need a broader alliance – also with unexpected allies.

Trade Unions about the climate change: VANCOUVER RESOLUTION

Resolution adopted at the 2nd WORLD CONGRESS of INTERNATIONAL TRADE UNION CONFEDERATION, Vancouver 21-25 June 2010 (fragments).

1. Congress recognises that the multiple crises the world is facing – energy, food, jobs, and climate – have common origins in a socially unjust, environmentally unsustainable and economically inefficient model incapable of providing decent work and decent lives to millions of people. This model makes wealth creation dependent on environmental degradation and generates unacceptable inequality. The planet’s warming continues to accelerate; water wars are already underway; unending droughts and expanding desertification are affecting the livelihood of millions; the rapid melting of glaciers increase devastating downstream floods in highly populated areas; climaterelated migrations, often intertwined within local and regional conflicts are growing; and substantial rises in food prices and energy costs throw millions into abject poverty.

2. Congress is committed to promoting an integrated approach to sustainable development through a just transition where social progress, environmental protection and economic needs are brought into a framework of democra-

tic governance, where labour and other human rights are respected and gender equality achieved. The global crisis must not be a pretext for delaying a global deal on climate change and indeed opens up new opportunities for a low carbon, labour intensive economy. The global crises show clearly that coherent and ambitious initiatives are needed to address the challenges of today and tomorrow. It demands a transformational change in global production and consumption systems to make our societies and workplaces sustainable and to safeguard and promote decent work for all. Trade unions must play a central role in this unprecedented transformation.

3. Congress emphasises the enormous potential for the creation of green and decent work from a successful process of just transition that provides new green jobs opportunities, anticipates potential losses of economic activity, employment and income in certain sectors and regions, and protects the most vulnerable throughout the economy and the whole world. It welcomes the Green Jobs report published jointly by the ITUC with UNEP, the ILO, and the IOE and calls for its major findings to be taken up in the development of national and international policy-making so that

the social and employment dimensions of the fight against climate change are fully addressed, including the full institutional involvement of trade unions in the planning and implementation of just transition measures, at workplace, sectoral, national and international levels; awareness raising of the importance of just transition measures among public officials as well as the general public; skills development, vocational training and other measures to re-employ any workers made redundant across all sectors; the provision of adequate social protection; investment in low carbon technologies; social dialogue; coordinated industrial policies and research; and transparent, democratic and effective global governance in the transition to a low carbon and resource efficient economy. Congress stresses the gender equality opportunities associated with the creation of green jobs, if women are trained and encouraged to join that sector.

5. The reality of climate change presents an immediate and dramatic challenge which, if unaddressed will have catastrophic consequences. Congress calls for a fair, ambitious and binding international climate change agreement and just transition policy framework

aimed at reducing greenhouse gases and dependence on fossil fuels while improving people’s living standards, without endangering industries’ competitiveness or putting excessive pressure on state budgets.

8. Congress recognises with deep concern that environmental degradation and climate change is already impacting severely the livelihoods of millions of working people and the sustainability of large numbers of communities. It is estimated that up to a billion people will be forced to leave their homes by 2050 due to climate change, environmental degradation and resultant conflict, with women being disproportionately affected. [...] Due to these and other impacts, climate change jeopardises human rights. It is essential that the fight against environmental degradation and climate change be carried forward with full regard to overall trade union goals of social justice, decent work and gender equality, within the framework of a strategy of just transition from the current production and consumption pattern to a sustainable low carbon climate resilient alternative..

Full version on: www.zielonewiadomosci.pl

