# Let's get Earthy:  Making our Landscapes Sustainable

## A comprehensive approach to ecological sustainability

I have been invited to talk about the comprehensive approach to ecological sustainability that ZeroSE is taking in our region.

I would like to start with some context setting that is somewhat philosophical…

We are living at a critical time in Earth's natural history.

A time when the most highly evolved of Earth's progeny, human beings, have so impacted on the natural systems that support all life on Earth, that we can be described as a force of Nature.

Our pathway from the earliest times has been marked by our curiosity and desire for certainty.  But our constructed knowledge over millennia has failed to keep front of mind where we come from and who we are - that we are Earthlings, co-evolving with other natural systems…

And at this time in Earth's natural history we are out of sync with the natural order.

How and why this has happened in another story. Today we are concerned with how we can get back in sync with the natural systems from which we evolved and on which we depend.

It is this challenge that drives the work of ZeroSE.

We are a Citizen's Alliance that provides a voice for community conservation in south eastern NSW. Our affiliates are the dedicated groups across our region that are working to realign human systems with the Earth system. They are engaged in transforming energy production and distribution, agriculture and forestry to be consistent with a healthy planet. Currently we support the work of groups across 14 LGAs.

We are a group of people with a history of engagement with conservation scientists, economists, lawyers, communication and media people, engineers, policy makers, advocates and caring citizens. Some of us have worked at the

highest levels of engagement with government, industry, universities and the conservation movement. We have observed the serial failure of successive governments to take a lead in transitioning us from a trajectory to chaos to a low carbon economy based on ecological sustainability.

Our Charter provides the guiding principles of our work.

I would like to speak to each of our Charter's principles to share our work with you. And while we apply these principles across all of our activities, today I will focus on how we apply them to agriculture.

## Evidence based research

*The foundation of our work is the preparation of factsheets that provide baseline data to support policy making and action in local government areas across south eastern NSW. The factsheets provide a template for similar work across Australia.*

The foundation of our work is based on scientific fact. And to this end we have produced factsheets for each of our affiliated LGAs.

The facts that we need are those that support a transition to a low carbon economy. We recognise that science in the service of industrial agriculture has resulted in the destruction of agricultural land. We are employing science in the service of regenerative agriculture. So the facts that we are interested in apply to the long term impacts of various farming practices on natural systems; restoring biodiversity in agricultural landscapes; drought and climate change resilience; reconciliation of agriculture and conservation, the links between environmental and financial risk; and sustainable livelihoods as an integral part of healthy landscapes.

## Factsheets

The factsheets provide baseline data as well as data on the impacts of climate action. This includes employment opportunities associated with sustainable practice and the diversification of income from regenerative agriculture.

The Goulburn-Mulwaree Fact Sheet for example, begins with a profile of the LGA: population, emissions profile, energy profile and livelihoods. The factsheet provides data on reducing emissions in the residential, commercial and transport

sectors–the upfront costs, the payback time and cost savings over time. There is analysis of current agricultural land use – cropping, grazing, intensive agriculture and water use. Then information on the impacts of changed agricultural practices on emissions to air, income diversification, productivity and landscape resilience.

## Ecological Integrity

*We respect natural systems and apply landscape ecology to the environmental challenges of our time. This means we acknowledge our coevolution with landscapes. Our policy recommendations apply to bioregions. Our actions recognise the interdependence of natural systems and are consistent with managing landscapes at scale.*

Earth systems science tells us that natural systems are interdependent. That any approach to landscape management needs to be at scale. In the past, failure to understand Earth systems has resulted in human fragmentation of the landscape. We have constructed boundaries around countries, states, local government areas and private land holdings. Policies and regulatory regimes have been framed to operate in this fragmented space. In Australia, environmental laws vary from state to state and are often in conflict - for example the regulation of noxious weed. While some weeds rampage freely across one state, they are declared noxious in another.

We advocate for bio-regional or catchment planning and endeavour to link climate change action across LGAs.

For example, we are currently working with Mark Jackson from the Carbon Store who has developed a tool to calculate the business case for the reforestation of marginal farming lands. The calculator takes into account income from carbon and biodiversity credits as well as from sustainable timber harvesting.

The environmental and financial benefits from this approach are ongoing. Mark's vision for the work are green corridors stretching for example from the Otways to Cape York Peninsula.

Earth system science tells us that bioregions flow across fences, across municipalities and across states. The greater the connectivity, the stronger the bioregion or catchment health and the stronger the resilience to drought, fire and climate change.

ZeroSE is planning to pilot the calculator across a number of LGAs in SE NSW. Once tested, Mark will place the calculator in the public domain so that farmers can access it at no cost.

## Community engagement

*ZeroSE is a voice for community action. Its affiliates are community groups that are dedicated to action on the ground. Its reach includes private citizens, schools, tertiary institutions, business and local government.*

It is clear that we work from an understanding that natural systems are bioregional and global. In other words that natural systems are inherently cooperative and function best when they work together. Similarly, we are a collective voice for the community groups that are engaged in climate action on the ground in our region.

These groups are representative of people all over Australia and indeed all over the world who are taking their destiny into their own hands, who want a future for their children and grandchildren, who want to change how we live on the planet. Year after year such groups endlessly fill in funding applications, compete for limited resources and work hard on the ground. We want to assist in their access to resources and ideas. We want to change the piecemeal approach to conservation work so that there is continuity and certainty.

And we want to optimise our collective strength. To this end we are developing a Climate Action Inventory that will hold information on what is happening on the ground. Currently, no one knows. Governments don't know. We intend to build a public platform for the exchange of information, ideas, and learnings. It will facilitate collaboration and economies of scale. It will transcend artificial boundaries.

## Comprehensive reporting

*ZeroSE implementation programmes provide consistent measurement, evaluation and reporting of on-ground outcomes. Our quality data enables learnings from the past and the aggregation of outcomes.*

Greater collaboration brings me to our next principle: comprehensive reporting. One of the great failures of conservation work in Australia has been the absence

of quality monitoring, measuring, evaluating and reporting the outcomes of work on the ground. One of the reasons state of the environment reporting has been problematic in Australia has been the lack of consistent quality data across the country.

If you can't measure outcomes how can you measure and learn from success and failure; if you can't measure outcomes **consistently** how can you aggregate results?

In some of the work, we are partnering with universities to ensure quality evaluation and reporting. This includes ANU on regenerative agriculture and human ecology, UTS and ANU on the socialisation of energy and UOW on energy efficiency.

We will also provide guidance by example through the Climate Action Inventory.

## Advocacy for climate policy and action

*ZeroSE advocates for climate and environmental policy change and action. While the action is focused in south east NSW, the advocacy is also at state and national levels. Our advocacy highlights the links between healthy environments, employment opportunities, increased productivity, reduced financial risk and quality of life.*

The principles of our Charter guide our advocacy work. In our engagement with government at all levels we promote a comprehensive approach to sustainable landscape management. Not only does this support enduring sustainability outcomes, it strengthens our political voice.

## A Comprehensive Approach to Regenerative Agriculture

I see a comprehensive approach to regenerative agriculture in Goulburn-Mulwaree including the following:

- Distinguishing the science of regenerative agriculture from the science of industrial agriculture
- Viewing sustainable livelihoods such as farming in the broader context of catchment or bioregional planning
- Collaborating across boundaries
- Using consistent methodology for measuring and reporting

Finally, I wish those of you who are engaged in regenerative agriculture or about to embark on this noble and necessary endeavour all the best for the future.

Dr. Di Dibley

Co-Convener, ZeroSE

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