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Strategic comments on draft South Australian climate change strategy

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General comments:

- The strategy documents are certainly heading in the right direction and South Australia can be proud to be leading the way in developing them.
- Grammar and language needs checking, for example, 'Innovation in managerial, operational and technological advancements boosts the State's competitive edge...' would perhaps read better if it said 'Innovation leads to advancements in management, technology and operations that boosts the State's competitive edge...'
- There are various statements that sound like 'government speak', that don't convey a lot of meaning or provide much insight, and that are not backed up by any further explanation or examples. For example, 'sustainability and prosperity measures provide new and better ways of doing things'.
- Technology and innovation present new opportunities but so does much of our current knowledge and we are not acting on it. There are systemic and other barriers that need unpacking if these strategies are to be effective. Climate change is the thing that is going to push already vulnerable systems over the edge and we need to more effectively address some of the root causes of degradation if we are truly looking to build resilience.
- The documents talk about resilience but don't define it in any context, nor do they talk about mechanisms for achieving it. Building environmental resilience requires us to reduce the stress on ecosystems. This is not discussed anywhere in the strategy documents. This would include decreasing the intensity of land use, reducing pollution and agrichemical use, reducing grazing/browsing pressure, rewilding – giving nature more space to adapt and evolve, restoring natural processes, etc. It means that we need to live more smartly, closing the loop, being less wasteful, adopting alternative and more efficient food production and distribution systems.
- Key to building social resilience is the need for social cohesion, flexibility in thinking, clear communications, and meaningful engagement and dialogue and there is evidence of commitment to this at the state level. Social equality is also critical. The documents briefly mention sharing resources more equitably but don't suggest how this might be achieved.
- There is no mention of the global political instability that is likely to result from the impacts of climate change and that Australia will be affected by. Such instability will be further exacerbated by the increasing social inequity on the planet. Climate change refugees are likely to increase in numbers and the current influx of North and West Africans to Europe is giving us some insight into how that might look. Australia is nearest neighbour to millions of South Pacific islanders – are we going to turn back all those boats? Surely we need a more enlightened and humanistic approach to human mobility?
- There is no mention of food and water security, not only ours but that of other regions or countries, and what that may mean with respect to stability, trade, etc.

- It is looking increasingly likely that sea level rise is going to be in the order of metres not centimetres. Change is predicted to happen in intense, rapid, punctuated bursts. How is government going to fund the level of emergency response, disaster relief and infrastructure repair that is likely to be needed and what sort of risk reduction strategies are needed?
- The dogma of economic growth and GDP needs to be replaced by a more sustainable and holistic economic model and measure. A system that incorporates environmental accounts is needed. The planet cannot sustain endless growth and there is plenty of information in the literature to support this statement and provide insight into possible alternatives. A number of planetary boundaries have already been crossed and we have to fundamentally change the way we live and do business or the downward trend in the condition of the earth's ecosystems and its ability to support human and other life will be further imperilled. We cannot spend our way out of this mess and there is an inherent contradiction between the action that is needed and encouraging consumerism. Furthermore, our ability to protect ourselves is being further diminished by free-trade agreements that surrender sovereignty and the rule of national law to the benefit of multi-national corporate profit.
- Scenario planning might be a useful tool for envisioning possible futures and pathways to those futures.

Overview:

- The guiding principles need to be more strongly and clearly stated with respect to environmental and social concerns. Environmental and social considerations should drive the development of the policies surely? Ecosystems and the services they deliver are consistently undervalued (or are not valued) and such value is rarely adequately considered in decision making and trade-offs with costs deferred to future generations, an issue that requires critical attention.
- Do we not need to think about or talk about the need to do away with perverse subsidies, for example, to the fossil fuel industry? Again the literature is clear, all currently unexploited fossil fuel resources need to be left in the ground if we are to avoid warming of greater than 2 degrees. Such funds would be better spent investing in a transition to a cleaner, renewable economy.
- Renewables are not without an impact of their own – how should this be managed?

Lead:

- More ambitious reduction targets are supported (including interim targets) and needed.
- More ambitious renewable energy generation targets are supported and needed.

Reduce:

- More ambitious reduction targets are supported (including interim targets) and needed and should be legislated.
- More ambitious renewable energy generation targets are supported and needed and should be legislated.

- The document(s) neglect to talk about geo-engineering and what the South Australian Government's position might be on such. This is an expanding field and some innovations might be helpful, working with ecosystems and natural cycles effectively with no or limited side effects, whilst other technologies have the potential to be environmentally disastrous – fixing one problem but causing other significant problems. A number of recent papers are indicating that emissions reductions may not be sufficient to avert a two degree temperature rise and that some or other form of carbon capture is going to be needed. What might be implications of this be and how should the problem be approached?
- Extensive and rapid reductions are required. For example, recent scientific publications regarding the condition of the oceans and marine ecosystems are becoming increasingly fervent in their message. One paper suggests that the rate of acidification of the ocean is far more rapid than previously realised and is so severe that if carbon emissions are not reduced to zero within the next 20 years the complete collapse of ocean ecosystems and food chains is predicted. Apart from acidification and temperature rise, the seas are already struggling with over-fishing and pollution. Ocean currents and circulation patterns are changing as water temperature and inflow of fresh water impact them, with significant implications on a number of levels.
- What sort of a policy environment is needed to encourage the start-up of small and community owned energy companies and local distribution networks or micro grids (may be mentioned in *The Low Carbon Investment Plan for South Australia*)?
- The production of biofuels is mentioned without much qualification. Prime agricultural land and food crops should not be considered for such, whilst technologies already exist for producing biofuels from algae fed by sewage for example (turning treatment cost into revenue).
- Legalising the production of hemp should be considered given that it sequesters more carbon and produces more fibre than trees, ameliorates degraded land, etc.
- The extensive impacts of meat production and consumption need to be properly considered and addressed.
- Countries like Sweden are leading the way in waste reduction and management and should be studied for lessons that can be applied locally (if they haven't already), potentially also creating new business opportunities.
- Facilitating a more rapid uptake of (renewably powered) EV's and hydrogen fuelled vehicles needs to be unpacked.

Innovate:

- Perverse subsidies that are currently allocated to the fossil fuel industry that should be reallocated to growing the renewable sector.
- Barriers to innovation and transition need to be explored further, including IP and patenting issues, start-up costs and affordable financing, etc.
- Innovation is also required in the way that we think about things and way we respond to challenges. Greater creativity and flexibility is required in our thinking and we need to find ways to foster this as well as ways to improve people's capacity to change their behaviour.

Adapt:

- The notion of adaptation requires more detailed exploration. Adaptation should be ecosystem based where possible. There is also potential for some technologies and innovations to be maladaptive.
- Monitoring and evaluation is mentioned but more is needed. Adaptive management and rapid social learning is key – not something that has traditionally been done well.
- How do we foster more creative and flexible thinking?
- A personal observation is that the approach to IVA's and developing CCAP's is mechanistic or reductionistic. A number of significant assumptions are made in the development of Climate Change Adaptation Plans that potentially render them less than ideal. For example, tourists will be affected by high temperatures when in fact there may be no tourists at all. Perhaps that is thinking too far into the future but if we are to adequately prepare we need to begin that journey.

Carbon Neutral Adelaide:

- There are some low hanging fruit that will assist in this transition and even greater awareness about the need to reduce energy consumption will help, for example, many of the city's offices remain lit all night and I am sure that countless appliances remain switched on or on standby.

Conclusion:

- The papers are general well considered and progress the discussion, whilst perhaps being a little light on how some of what is proposed might be achieved. However, we need to get away from an 'improved business as usual' model and make the transition to a truly sustainable way of life where ecosystems and the services they deliver are properly valued and effectively factored into decision making. If this is not a conversation that Government leads, then it needs to be a conversation that Government is more responsive to at the very least.

NB. References can be provided to support and further illustrate the above comments if needed.