

WATER CATCHMENTS — SOUTH WEST RECOVERY PROGRAM

Amendment to Motion

Resumed from 17 June on the following motion moved by Hon Giz Watson —

That in the light of the declining rainfall and catastrophic decline in surface water inflow to our dams and the impact of salinity on our south west water catchments, this house calls on the government to implement as a matter of priority a comprehensive upper catchment recovery program based on farm forestry that aims to restore water and salt balance in the six key water catchments in the region.

to which the following amendment was moved by Hon Helen Morton —

- Line 1 — To delete the word “catastrophic”;
- Line 2 — To delete the words “calls on” and insert “notes” after “house”;
- Line 2 — To insert the word “initiatives” after “government”; and
- Line 4 — To insert the words “and other initiatives” after “forestry”.

HON PHILIP GARDINER (Agricultural) [2.07 pm]: When this debate was adjourned last week I was referring to measuring salt water on a farming property north of Perth and north of Great Eastern Highway.

Piezometers are used to ascertain how far the salt water is from the ground surface. I actually carried out this procedure when I was on the farm last weekend. I found the water, which was very briny, just 2.6 metres below the surface. From the ongoing measurements of this water, one of the most interesting historical observations we have made is that the saltwater level is lowest in wintertime and highest in summertime. It seems to be the wrong way round. The only explanation we have for that is that the water catchment area for Moora, where I live, is from Dalwallinu east to Miling, and the water must percolate into the soil and flow underground. However, it takes possibly six months or so for that water to flow down and lift the brine level up to about a metre in summertime.

Run-off is quite a complicated affair. If we want to talk about the run-off flowing into the lower streams of a catchment, which it can do because catchment areas become salty, a hydrological study is necessary to understand how that water flows. I mention this because it demonstrates that the relationship between catchment and run-off is not an easy one. The need to have forestry, perennial pastures or something else that will hold the water and disallow the watertable to lift is very relevant. However, we are finding now, with the minimum tillage that most agriculturalists are currently engaged in, that the water is retained and there is less run-off because it is designed to hold the water to sink down into the watertable. I mention this because it has relevance, but only of a minor kind, to the discussion on the lower south west catchment areas. I will leave deeper discussion on that to my colleagues. However, I hope I can advance a little the notion that putting forestry on the recharge areas is not necessarily the solution that it might seem to be to improve the run-off and flow into the lower areas.

HON COL HOLT (South West) [2.11 pm]: I rise in support of the amendment to the motion. It gives me great pleasure to be able to speak on this motion, and I thank my colleagues for bringing it to the notice of the house. I represent the South West Region, an incredibly important part of the state of which the river system is an integral part. As Hon Philip Gardiner said, the management of water within the landscape is a very complex issue. There are many examples of engineering and revegetation works that have been developed in river catchments not only on a large scale, but also on a localised scale that show the complexity of what we are working with.

This amendment to the motion is all about water use in the catchment. Land care groups and farmers have been working for decades on how they can use as much water as possible in the catchment. During the growing season in the south west that does not seem to be an issue when plants are actively growing, but the summer rain events that occur outside the growing season can have a very large impact on river flows and groundwater recharge events.

Something else to consider is the underground geomorphology of the landscape and how the landscape is compartmentalised to a large degree. There is an advantage and a disadvantage in that. We need to consider strategically the works that we do within the landscape to improve water flows and water quality. The advantage is that it can be very localised and sometimes the issues in the catchment do not go past the natural barriers within the landscape. We can therefore treat local areas, and I have seen many examples of that occurring. However, that often takes some serious investigation about the sorts of works and the extent of those works that can occur in the landscape to bring about change within those river catchments and to improve water quality.

Interestingly, I was around when the Decade of Landcare initiative started, which I think was about 1989. At that time the main thrust of the Decade of Landcare initiative was to bring about attitudinal change. If we think about the landscape 80 or 100 years prior to that, it was about clearing and opening up space for food crops and pastures. That was the attitude that pervaded the community at the time. The Decade of Landcare initiative was

really about changing those attitudes. After 10 years, I believe there was great attitudinal change. There was lots of evidence that we really needed to change the way we farmed and how we treated the landscape. Some of that has been talked about in this chamber already. We really do need a much more sophisticated approach to how we use water and how we recharge our rivers with fresh water and keep out the salt water. The intervention needs to be a coordinated approach.

Farm forestry has proven to be successful in many places. Within the landscape, there are perennials that use water that falls outside the main growing season. Obviously they have a very big role to play. If we look at the role that farm forestry has played in the higher rainfall zones—which really are in the south west corner of the state—after some catalytic funding and project development by agencies such as the Department of Conservation and Land Management and the Forest Products Commission we have an industry based on farm forestry in those regions. We have seen the results of improved water flow and water flow qualities in those catchments.

The big danger from those sorts of industries that become a monoculture amongst the landscape is the risk that is associated with having perhaps a lack of resilience within the landscape and within the industry. I know of many circumstances in local towns and communities in the lower south west in which farm forestry has taken over a large amount of farm property. Farmers are happy to sell out or to lease their land for farm forestry. Often, this will push them out of the community and they will go and find work somewhere else while the trees grow.

I was talking to someone in Frankland the other day. Frankland is an area that has felt the effects of the farm forestry industry. Some families have moved because the farming work is not there any more. Industries have opened up as a result of the farm forestry that is there, such as the management and the harvesting of those products. I was talking to someone about the effects of the collapse of farm forestry companies Great Southern and Timbercorp. That has had a large effect on their communities. I was told that 14 people from that very small community have left since those events occurred.

I am very cautious about saying farm forestry is a total solution to any sort of activity in the south west in high rainfall areas. If we talk about medium to low rainfall, the same sort of scenario applies. It has to be an integrated approach. It also has a fair bit to do with medium to low rainfall agroforestry. There has been a push in those regions for a long time now to develop further farm forestry products. The oil mallee industry has been going for 10 to 15 years. A huge amount of resources has been planted out in the landscape. Although I have not totally come across the issue lately, I know there are some issues, now that we have got this resource, about what we do with it. There are a number of possibilities. A bioenergy plant in Narrogin was trialled, which I think was fairly successful, but I am not sure whether it has been rolled out. It had not only the by-product of energy but also activated carbon and the eucalyptus oil itself. Other industries are things like sandalwood, *Pinus pinaster*, and some sawlog and firewood timbers. Because it is medium to low rainfall, there is the issue in terms of farm forestry. Although the higher rainfall zones have lots of water and high growth rates, in other areas where the rainfall is a lot less, some commercial aspects of farm forestry are not there. We need to think about industry investment into these industries and into farm forestry. Government can only go so far in playing a catalytic role in developing the industry. We need commercial viability for industries to get involved in farm forestry. I do not think we are there yet. The large-scale uptake of farm forestry through those medium and low rainfall areas has not occurred yet. As I said before, there has been a huge attitudinal change when looking at options of farm forestry. I think those attitudes will continue, but we need to find that commercial product that will encourage people to go into it on the scale that is required. The scale is quite enormous. There is a lot of land in the south west and further out to the head of those river catchments. I will give members an example of the scale I am talking about. When I was living in Narrogin, I was involved in a tree planting program called the Western Power greening challenge. Western Power brought its workers down to Dryandra Woodland, where they camped for four weekends over winter and planted trees. It did this for four years, with the aim of planting one million trees around Narrogin. One million trees sounds like a lot but it probably involved less than one per cent of the landscape. We are talking about a huge scale. We need a commercial investment to bring about that scale, just as has happened in the south west. We need the same in the medium to low rainfall areas and the heads of these catchments, where a lot of the salt load is coming into the river systems. We still have a bit of work to do before we find a commercial option.

I want to talk a little about not just commercial properties taking up investment in those farm forestry industries, but also the pressures faced by the traditional farmer and landholder in their day-to-day activities that give a return year in, year out, remembering that in some of those areas farm forestry might take 30 or 40 years to provide a return. If we look at sandalwood, which is still being tested, it could be 50 years before farmers get a commercial return on their investment. That does not help in the short term when people still have to feed their families, send their kids to school and run their day-to-day lives. This is where we need an integrated approach. Although we need to ensure that people on farms are looking at contributing environmentally to the use of water within the landscape and reducing the salt load going into rivers, we also need to consider that families and

communities rely on traditional farming industries throughout those regions. They need a viable business before they can even think about planting trees that give a return.

I quickly want to talk about Maslow's hierarchy of needs, which some members may have heard about. Maslow's hierarchy is a scale that shows we need to make sure that we have shelter, food and water before we worry about broader life skills. Self-actualisation is at the top of the tree. This is where some of those farmers and communities are at. They need to survive day to day before they can invest in other activities that have an environmental outcome and do not show their financial benefits. We have to get those things right before we try to promote the benefits of farm forestry for a river safety outcome. Although that is important, this is the mind frame that a lot of communities and farmers in those areas have.

I would also like to briefly talk about engineering options. I touched on this before. We face a very complex issue in dealing with fresh water in river systems and ensuring that we do not load them up with salt. I am aware of a project called Lake Toolibin near Wickepin, which is the last freshwater lake in the great southern. Some very special engineering techniques were developed to make sure that when rainfall events occurred within that catchment—it is an internally draining catchment—the very first rainfalls, which picked up all the salt from the break of the season, were diverted away from the lake through a series of gates to ensure that they followed a creek system away from Toolibin Lake. The salt load was monitored through the seasonal winter rain events, and when the water coming through the catchment reached a certain level of freshness, it was diverted into Toolibin Lake. There has been a lot of investment to address those problems at Toolibin Lake alone, and many years of engineering design and monitoring. They are still trying to find the right answer for Toolibin Lake. One can imagine the scale of the increase required if we were to apply the same level of investment to the river systems of the south west referred to in this motion.

I definitely support the thrust of the motion and recognise that these are important landscapes for the south west and for Western Australia generally, that these are important issues, and that we want our river systems to be strong, healthy and resilient. However, I also think these problems need to be addressed in the context of the social infrastructure around those river systems to ensure that they are healthy, strong and resilient communities that can see the importance of investing in these environmental outcomes for their own regions and for the rest of the state. I support the amendment.

HON GIZ WATSON (North Metropolitan) [2.26 pm]: Mr President, would it be more appropriate for me to begin by speaking to the amendment and to then respond to the substantive motion? I seek the President's guidance; I am happy to do it the other way round.

The PRESIDENT: You need to speak to the amendments at this stage, but if no other members want to speak to the amendments, I will put the amendments and you can then come back and speak to the substantive motion.

Hon GIZ WATSON: Thank you, Mr President; that is useful.

I have listened with interest to the contributions to this debate and I appreciate the fact that members have applied some research and thought to their contributions. The initial amendment proposed by Hon Helen Morton is to delete the word "catastrophic", which is the descriptor of the decline in rainfall. I could perhaps consider the words "serious" or "significant" in place of "catastrophic". I did not draft this motion; it was drafted by Hon Paul Llewellyn. When the motion was drafted, the choice of the word "catastrophic" was deliberate because the consensus in the scientific community is that the decline in rainfall and the consequent decline in stream run-off in the south west is, indeed, a catastrophic shift. It reflects a fundamental shift in weather patterns in the catchments referred to in the motion. I would certainly argue that "catastrophic" is an appropriate descriptor. I notice that Hon Helen Morton is unfortunately out of the house on urgent parliamentary business; I was going to suggest that she might accept the word "serious" or something similar. It appears not; we cannot negotiate on terms.

Hon Norman Moore: You don't negotiate in this place, you make decisions.

Hon GIZ WATSON: Do we not? I do. Okay; we are not negotiating on that one. I do not accept that amendment.

The remainder of the amendments proposed by Hon Helen Morton on behalf of the government simply turn this motion around to try to say that everything is okay and that we are quite happy with the direction of catchment restoration and the speed at which it is occurring. However, the very point of this motion is to say that although we recognise that catchment management plans are in place, and that these catchments have received some recovery priority, not enough has been done. I have already noted, and some other members have mentioned, that the Hay-Denmark catchment is the only example of a successful turnaround of salinity levels in a significant river system in Western Australia since European settlement. I acknowledge and accept that something is being done right in the Denmark catchment, but the trends are not good for the other catchments. When I respond to the substantive motion, I will provide some additional information, mainly from the "State of the Environment

Report: Western Australia 2007”—the most recent—which is a very reliable source of assessment of the trends in environmental factors. Although work is being done, it is being impacted by reduced funding, particularly from a commonwealth perspective, with the change from natural resource management programs to caring for country programs. I realise that that is linked with federal funding, but, as we know, often these initiatives utilise both state and federal funding.

Today I received a letter addressed to the former member of the Legislative Council for the South West Region, Hon Paul Llewellyn, which referred to a catchment in the south west for which the catchment management team is continuing its struggle to get enough funding to continue with the very basic work that it needs to do. That is what is being said by the people engaged in the activities necessary to restore water quality, and I am being told that they have not got enough resources and are not able to do all the work required to meet the targets that have been planned for these catchments.

In conclusion, and not wishing to prolong my response to the proposed amendment, I cannot accept that Hon Helen Morton’s amendment does anything other than to suggest it is business as usual and everything is okay in our catchments. I simply cannot support that because it is contrary to the intention of this motion, and therefore the Greens (WA) will not be supporting the amendment.

Amendment put and passed.

Motion, as Amended

HON GIZ WATSON (North Metropolitan) [2.32 pm]: I want to make some comments in response to various members’ contributions to this debate. Firstly, questions were raised about why the motion referred to these particular catchments, and some of the contributions to the debate referred to broader issues of catchment management, not specifically these five catchments referred to in the motion. The reason that these catchments were chosen is that they have catchment-recovery programs in place, so we have the capacity to assess and track how successful we are against certain criteria for catchment recovery. Catchments with part of their catchment in forested areas and part in cleared areas—the upper third being in cleared agricultural or semi-agricultural areas—have been identified as being able to recover within a 15 to 20-year period. I guess these catchments have been selected because they have the potential for recovery in the near future, rather than going for a much longer-term strategy, which is needed for the larger catchments and the catchments in the lower rainfall area.

I noted a comment was made that this motion seems to be limited to plantation forestry and farm forestry. Perhaps we were remiss in the wording of the motion and that we should have elaborated that when referring to farm forestry, we were also hoping to encompass other land management options, such as alley planting and alternative crops. For example, I think one member talked about lucerne as a crop that can have a high water uptake and therefore has a valuable role to play in managing the water and landscape. We certainly were not limiting the proposed recovery plans to plantation timber. A mixture is recognised as well as, obviously, alternative and varied methods of modifying the soil et cetera. There is a range of methodologies and options, particularly looking at providing alternative sources of income, and I do not think that we have exhausted the options of different potential crops that could provide solutions for salinity and soil erosion, as well as economic returns.

I acknowledge that the recent collapse of large farm forestry businesses has had a very sobering and catastrophic effect in the south west, not least for those investors affected, but it indicates to me that if the driver for those sorts of land use changes is purely economic, then it is also quite vulnerable in that people have invested, and been encouraged to invest, where their money is most secure—that is, the higher rainfall areas, which unfortunately also have the best potential for other crops. Therefore, we are planting blue gums in areas that would probably be better reserved for other agricultural production. We actually want the trees planted in the lower rainfall areas, but that is a much more risky investment. We have seen all that played out in the south west, and when these big companies collapse, it does not encourage the public to invest in these sorts of enterprises, so it really has enormous consequences. The other factor is that to use solely economic incentives as the driver to try to achieve changes in land use is ultimately a very crude tool; we get masses of people investing in blue gums and masses of people investing in grapes and masses of people investing in olives, but we actually need some sort of capacity to direct and moderate that investment so we get the sort of mix that achieves not only good economic returns, but also good environmental outcomes. If we use the dollar investment as the only driving factor, the environmental outcomes become kind of a bonus rather than being factored into the whole program. For example, we know that there are significant environmental questions about aerial spraying and the contamination of streams in the south west because of a monoculture—namely, blue gums. It might be okay and improve water quality on one level, but on another level there are consequences; people who were trying to farm yabbies ended up suing people who were aerial spraying because it was killing the yabbies in their dams.

We must have other levers that we can pull to get that mix right. One is a much more integrated approach, rather than just monocultural slabs of blue gum across the landscape, which have environmental and social consequences. I want to be clear that we are talking about a much more diverse response, including protection and enhancement of remnant vegetation, which achieves multiple purposes.

I want to respond to the notion that has been the flavour of the contributions by most of the participants in this debate; that is, that basically we are on track. I have referred to the "State of the Environment Report: Western Australia 2007" for an overview of how we are going with catchment-related issues. Page 9 of the report deals with the issue of climate change, reiterating that this is a catastrophic change. Under the heading, "Projected trends in rainfall for Western Australia", the report states —

Climate modelling by the CSIRO ... indicates that under increasing greenhouse conditions there is a good chance of reduced rainfall in the South West. Average annual rainfall in the South West may vary by -20% to +2% by 2030, and from -60% to +10% by 2070, relative to 1990 levels

That is a further reduction of 60 per cent in our rainfall.

Hon Norman Moore: It could be plus 10 per cent.

Hon GIZ WATSON: It could be plus 10 per cent. That is the nature of scientific prediction. If it is plus 10 per cent on where we are at the moment, that would not even take us back to where we were before, if the member follows my drift, because we have already gone down 15 per cent.

Hon Norman Moore: That just goes to show how inaccurate these predictions are. If you pick the worst case scenario every time, you get the wrong impression.

Hon GIZ WATSON: I rely on a body such as the Commonwealth Scientific and Industrial Research Organisation, which is well versed and very cautious in its predictions.

Hon Norman Moore: The range was plus 10 to minus 60. That is hardly an accurate reflection of what might happen.

Hon GIZ WATSON: Perhaps the member could tell me what his prediction is.

Hon Norman Moore: I have no idea. Like I say, plus or minus 100 per cent. It would be just as accurate as that.

Hon GIZ WATSON: Some people still think the earth is flat, as well.

Hon Norman Moore: That is a typical response to these arguments. You just try to ridicule anybody who does not accept your arguments absolutely verbatim.

Hon GIZ WATSON: With the greatest respect, this is one of those issues in which it is a question of whether we take a precautionary approach. It is a question of whether we look at the evidence as presented. There is an enormous amount of evidence, and it continues to mount in these matters. I agree that it is unpredictable, and that is exactly part of the problem. The unpredictability is one of the most significant factors. If we knew there was a predictable decline like this, we could, to some extent, plan for it, but the fact that it is not predictable makes it even more important that we take a precautionary approach.

Hon Norman Moore: You have just given a range of plus 10 to minus 60, and you have chosen minus 60 to match your argument. It might be plus 10, in which case we would all be laughing.

Hon GIZ WATSON: I am simply saying that if it is minus 60, we have a problem. That is all I said.

Hon Norman Moore: So, do we plan for the worst case scenario?

Hon GIZ WATSON: I think we should.

Hon Norman Moore: Then we might as well shut up the shop and go home.

Hon GIZ WATSON: I can explain the logic behind planning at least for a contingency of the worst case scenario, because if we do not, the consequences are catastrophic.

Hon Norman Moore interjected.

Hon GIZ WATSON: That is right, and hence the motion.

Mr President, where was I?

The PRESIDENT: I was just wondering that myself, actually, because the summing up really should relate to comments made by other members, and drawing the arguments to a close, and not introducing a whole new speech.

Hon GIZ WATSON: I will attempt to constrain myself and ignore unruly interjections. The point I am making is that the “State of the Environment report” makes it very clear that not only have we experienced a catastrophic decline in rainfall, but it is also likely to continue. The report continues —

The effect of particulate haze in Asia on rainfall in WA has not been included in the CSIRO's climate change models which may explain why the models have not reproduced the observed increase in rainfall for northern WA ...

Further climate modelling by the Indian Ocean Climate Initiative supports the CSIRO projections for rainfall decline in the South West. The modelling consistently indicates that ‘wet season’ (May to October) rainfall will decrease in the South West, in a number of climate models and under a range of emissions scenarios ...

As to whether we are doing enough in the management of catchments, again I would just suggest that we are not, and that is why this motion is still important. At page 84, under the heading “Salinisation of inland waters” and a subheading “Recovery catchment programs (water, biodiversity)”, it states —

These programs focus on the stabilisation and recovery of important natural resource assets already impacted by salinity. In relation to water resources, action is currently being taken in the Collie, Denmark, Warren, Kent and Helena rivers to stabilise and reduce salt levels flowing into dams. Recent analysis indicates that land clearing controls and reforestation in the Collie and Denmark river catchments have halted the increasing trend in salinity ... The Denmark River represents a breakthrough in salinity management because it is the first time in Australia that river salinity levels have been reversed due to planting of trees, community and government actions, and application of engineering solutions —

It continues —

Excessive salinisation of inland waters results in a catastrophic collapse of aquatic ecosystems.

It has quite a bit of information on charting those impacts, which I will not go into because I have been guided that this should be a brief response. In the overview of the report at page VI, a number of significant indicators are given a status or trend. In the area of inland waters, it indicates that the trend is downward and that it is a matter of concern. It states —

Many waterways and wetlands in WA are degrading, especially in the South West. Better management and protection of inland waters is required.

Environmental priorities are referred to at page VIII. It states that the salinisation of inland waters is a priority rating 2 out of a possible rating of 5. It is seen as a high priority in environmental issues facing this state. At page IX, in relation to inland waters, the only indicator that remains in a neutral position refers to water regimes, where it states —

Many inland waters have been significantly modified due to land use change and increased demand for water supply.

For every other indicator, such as erosion, eutrophication, degradation of fringing and instream vegetation, all the arrows are pointing downwards.

The key issue that I wish to raise in this motion is that although catchment management strategies are in place for these catchments, and although we are seeing positive trends in at least two of these catchments, unless we apply the level of resource to the community at the grassroots to continue with the on-ground catchment management issues, and we also address our concerns to federal government with the way it is structuring its funding programs, I do not believe that, in the face of a drying climate, we will achieve the targets that these catchments need to provide water quality and environmental outcomes. The point of the motion is to say that the state government needs to increase the allocation to these catchment restoration projects, and that more needs to be done to look at innovative and integrated land use that provides multiple benefits. I acknowledge that some work has been done in this area, and some very good work is being done, but I am concerned that it has not been funded in order to reach its targets at a rate that will actually defeat the pressures of a drying climate. With those comments, I ask the house to support this motion.

Question (motion, as amended) put and passed.