APPENDIX I:

Issues and Responses Trail

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Comments received from I&APs before the release of the Draft EIA and EMP

1. Sense of Place

	Comment	Commentator	Date	Response
1.1	Construction of all these facilities would permanently alter the nature of this rural landscape.	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	28/06/2011 email	Yes, the construction of wind farms in the Kouga region would alter the visual character of the landscape. The visibility of the wind farms from sensitive receptors (e.g. tourism locations) was investigated (see Chapter 8 for the visual specialist study). It should also be borne in mind that the power currently utilised in the Kouga area is mostly generated from coal power stations (e.g. in Mpumalanga) and is transported over 1200 km via high- voltage lines to the Kouga area. These powerlines themselves have significant visual impact on the landscape they traverse. Any energy production facility will have a visual influence. The production of energy from the wind farm will not emit carbon and does not need fossil fuels that have been excavated at this or other places.

2. Impacts on Birds

	Comment	Commentator	Date	Response
2.1	The effect on bird species would also be significant. This particular area is the country's stronghold for Denham's Bustard, a vulnerable species, and Blue Cranes, White-bellied Korhaan, White Stork. Greater and Lesser Flamingo and Secretary bird are also found here in high densities.	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	28/06/2011 email	Pre-construction bird monitoring was undertaken and was completed in September 2011. Both densities and flight patterns of priority species were recorded. The results from the monitoring programme and the proposed mitigation measures based on the monitoring are included in the updated Bird specialist study (Chapter 6 of the Final EIR)

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	Comment	Commentator	Date	Response
2.2	The most severely threatened of South Africa's ten			There is very little published information available on the impacts
	bustard species is the Denham's Bustard. Wind			of wind developments (as opposed to power lines) on cranes and
	farms, like power lines, pose a serious threat to			bustards. The statement that bustards are at the top of mortality
	bustards (and to cranes).			lists for wind turbines needs verification, this statement is
				definitely true for power lines, but not necessarily for bustards.
	Internationally, bustards are at the top of the			Indications are that bustards might be displaced from the area by
	mortality lists for wind turbines. The reason has			the activities of the wind farm, which amounts to loss of habitat,
	recently been identified through research, which			rather than collision mortality. The pre-monitoring programme
	shows that bustard visual fields have large blind			that was undertaken will continue after construction to assess the
	sectors projecting forwards. Unlike herons, which			actual impacts on bustards (and other species).
	need comprehensive forward vision for close-			
	range stealth-foraging, bustards need wide			
	ranging vision to detect predators and food			
	sources at considerable distances. Blind spots			
	are the evolutionary price they pay, and without			
	man-made obstacles in their flight paths the price			
	would be nealigible.			

3. Cumulative Impacts

	Comment	Commentator	Date	Response
3.1	Hundreds of giant turbines, sunk into huge cubes of concrete, planted over hectare after hectare of rural landscape. There are at least ten wind farms planned in the area of the Kouga Municipality in the Eastern Cape. Eight of these facilities are within a 20km radius of one another, and four of them either border on one another or almost do	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	28/06/2011 email	It needs to be understood that the existing power grid in the Kouga area can only accommodate an additional input of approximately 150 MW. Table 14.1 (in Chapter 14 of the DEIA Report) shows that the proposed wind energy projects total more than 700 MW additional installed capacity (including the Ubuntu project) and therefore when considering cumulative effects it needs to be understood that it is not currently possible to connect

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Comment	Commentator	Date	Response
(Tsitsikamma, Red Cap West, RES Oyster Bay, and Red Cap Central).			all these projects to the grid.
Four of these proposed developments have already received environmental authorisation.			For further detail, please refer to the discussion on cumulative effects in Chapter 14 (Conclusions and recommendations) of the Ubuntu Final EIA Report.
The Jeffrey's Bay Wind Project, Red Cap's Western Cluster, Red Cap's Central Cluster, and Red Cap's Eastern Cluster will be spread over 12 000 hectares – almost 6% of the whole Kouga area.			

4. Project Need and Motivation

	Comment	Commentator	Date	Response
4.1	The St Francis Kromme Trust supports the quest	Maggie	28/06/2011	It is expected that the capacity factor will be higher than those
	for renewable energy production for South Africa	Langlands, St	email	quoted by Eskom.
	and particularly environmentally-friendly sources of renewable energy. The issues we have with wind power are its inefficiency, high cost, and major impact on the environment.	Francis Kromme Trust, Renewable Energy		The cost of wind power needs to be benchmarked against coal power, given that approximately 93% of South Africa's power generation is derived from coal.
	An Eskom spokesperson estimates that a wind farm is doing well if it's putting power into the grid 27% of the time. The actual amount of power produced is minimal, about a quarter of the capacity claimed. And it is extremely expensive:			In 2009, NERSA predicted that wind energy (costed at R 1.25 per kWh as per 2009 feed-in tariffs) would be cheaper than coal- based power by 2020 to 2025. However, given the recent multi- year increases in the Eskom electricity rates and reduced wind energy tariff and competitive bidding (announced by Dept of
	in Britain at least twice the price of electricity from			Energy on 3 August 2011), it appears that the price of wind

	Comment	Commentator	Date	Response
	conventional power stations. In South Africa, if the 2009 REFIT tariff applies, it will be two and a half times the price. But most of all, the impact on the environment is substantial.			power may be competitive with coal-based power from as early as 2015. Furthermore, if you take into account the externality costs of coal-power (such as water usage, CO ₂ emissions and effects on
				climate change), then the "total cost" of wind power is even more attractive. The proposed Ubuntu project of 100 MW could offset over 200 000 tonnes of CO_2 per year, or 4 000 000 tonnes of CO_2 over the lifetime (20 years) of the project. Coal fired power stations used approximately 292 million cubic metres of water, or 1.5% of national water consumption, for electricity generation during 2005.
4.2	We submit that, for an inefficient power source, these environmental costs are too high.	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	28/06/2011 email	Comment noted.

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5. EIA and Public Participation Process

	Comment	Commentator	Date	Response
5.1	Can you please inform when was the Final BAR submitted to the authorities and what is the latest status re this project? It might fall within the EIA Thyspunt Tx Power Lines Project. Can I request that the following stakeholders are also registered on the project database: - Lerato Mokgwatheng - Environmental Adviser: Eskom Transmission (Thyspunt Transmission Lines Integration Project) - Dean Wilson - Negotiator: Land and Rights - Eskom Transmission (Thyspunt Transmission	Nicolene Venter, Sivest, Eskom Consultant	24/01/2011 email	A Final Application for wind monitoring masts for Ubuntu was submitted to the authorities in July 2010. However, the amended 2010 EIA regulations came into effect in August 2010 and wind monitoring masts no longer require environmental authorisation. The CSIR has subsequently initiated the EIA for the Wind Energy component of the project. The Final Scoping Report has been submitted to DEA and approval has been obtained for the Plan of Study for EIA. The Draft EIA and EMP have been released for a 40-day comment period from 18 August 2011 until 26 September 2011. The project is now at the stage where the Final EIA is submitted to the national Department of Environmental Affairs for
	Lines Integration Project)			decision-making. The I&APs as requested have been placed on the project database and were notified of the review period for the Draft EIA
				and EMP.

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Comments received from I&APs during the Review of the Draft EIA and EMP

6. Impacts on Birds

	Comment	Commentator	Date	Response
6.1	What form will the offset compensation for the loss of the bird habitat be? It is not within the power or authority of the developer to declare an area as special as part of an offset.	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	23/09/2011 Pub Mtg	The compensation can take different forms, and will depend on the impact on habitat. Please refer to the chapter on birds for the specialist recommendations (see Chapter 6 of the Final EIR). Depending on these recommendations, it could be considered to lease or acquire land as an offset.
6.2	There is a huge problem with cumulative impacts in this area. There are 10 wind farm applications, five of which have been approved. The greatest cumulative impact would be on the Denhams bustard, whose entire habitat in the area would be destroyed if all these projects proceeded.	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	23/09/2011 Pub Mtg	There is a possibility that Denham's Bustard might be displaced. In such a case, it will indeed be a significant impact if that happens at all the sites. However, we cannot predict that at this stage, as we do not know yet if displacement will happen.
6.3	With regard to the cumulative impact of wind farms on bird habitat, the Trust points out that the Ubuntu project is one of ten wind projects proposed for the Kouga area. Kouga is the nation's heartland for the Denham's Bustard and is rich in other Red Data bird species that are vulnerable to turbine and power line collision and to habitat displacement.	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	24/09/2011 email	Noted. See comment above. Note also that we cannot assume that turbine collisions will be a significant impact. Based on flight surveys, the predicted collision rate for Denham's Bustard is 0.04 - 0.36 birds over an approximate 10 months period. This will have to be verified through post-construction surveys.
6.4	While it is unlikely that all ten facilities will be constructed immediately, it is not impossible that they will all eventually go ahead. This will have a serious cumulative effect and it is essential that sufficient habitat be preserved to ensure these species' continued survival. This applies not only	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	24/09/2011 email	See previous responses above. Table 14.1 in Chapter 14 of the Final EIR includes a table of other proposed wind farms within the Kouga region. Not all of these projects have received Environmental

	Comment	Commentator	Date	Response
	to Kouga, but to many other localities around the country.			Authorisation yet. The IPP tender program announced by Government in August 2011 allocates 1 800MW of renewable energy to wind power, with strict criteria to be met before projects can be allocated capacity. One of these criteria will be grid connection conditions, which will be a limiting factor in the Humansdorp/Jeffrey's Bay area. Therefore, even if several projects are proposed in the area and EIAs are being conducted, only a selection might proceed. Even if the EIAs for each of the projects are approved in terms of NEMA, the projects may not proceed without a license from the National Energy Regulator of South Africa (NERSA), which will only be granted on being granted permission by Government through the tender process.
6.5	As a member of the South African Wind Energy Association, the developer is urged to actively motivate for the association to create a fund for the preservation of the habitat of affected bird species, and for each project actually constructed to contribute a meaningful amount to the fund, sufficient to enable the fund to buy entire farms if necessary for habitat preservation.	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	24/09/2011 email	The South African Wind Energy Association (SAWEA) currently works together with the Endangered Wild Life Trust and Bird Life South Africa. A Birds (& Bats) Wind Energy Working Group has been formed, which are addressing the issues of concern regarding wind energy, birds and bats. The CSIR raised the suggestion by Ms Langlands to establish a fund for the preservation of the habitat of affected bird species on 28 September 2011 at the Windaba Conference in Cape Town. The Conference was hosted by the SAWEA.

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7. Traffic and Road Impacts

	Comment	Commentator	Date	Response
7.1	The equipment to be transported to the site is very large. Are the existing farm roads of a sufficient size and in a suitable condition for the transportation of the equipment or will you require upgrading of roads in order to deliver the equipment?	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	23/09/2011 Pub Mtg	The existing farm roads will be used for the transportation of the turbines and the turbine infrastructure. The roads will be upgraded where necessary to the specifications for the transportation of the turbine parts.
7.2	Will you access the site off the N2, if yes, where is the access point? If there is no access off the N2 how will you access the site?	Cllr David Aldendorff, Councillor	23/09/2011 Pub Mtg	The site will be accessed via the N2 and then off the R102.
7.3	If you are to access the site off the R102, the heavy vehicles will impact on the condition of this road, who is responsible for maintaining the road and will it be maintained?	Cllr David Aldendorff, Councillor	23/09/2011 Pub Mtg	A Transport Management Plan will be prepared by WKN- Windcurrent and the turbine supplier as part of the technical planning for the project. Details with regard to the transporting of the turbines to site (route from port; safety aspects; possible structural damage to roads and who pays; road traffic disruption etc) will be incorporated into the Transport Management Plan. The Transport Management Plan will include a pre-construction assessment of the R102. After the construction phase, a post- construction assessment will be done to identify possible impacts to the roads. The road will then be upgraded to the same standard prior to construction. WKN-Windcurrent will liaise with the local authority on this matter.

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8. Wetland Impacts

	Comment	Commentator	Date	Response
8.1	Two of the turbines all within an area that appears to designated as a wetland in the Bird Specialist assessment, on the southern boundary of the property. If this is the case, there will be avian movement between this wetland and the wetland to the west which will impact on bird mortalities.	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	23/09/2011 Pub Mtg	The two turbines in question are actually not situated in wetland habitat. The area was incorrectly indicated as wetland in the draft bird specialist report (see Figure 6.6 in Chapter 6 of the Draft EIA) in fact it is grassland. This was rectified in the final specialist report (see Figure 6.6 In Chapter 6 of the Final EIR). Indications from the recorded flight paths indicate random movement across the whole turbine area. The overall predicted collision risk for priority species (combined summer, winter and spring period) as a group is low, ranging from 0.008 – 0.079 birds/turbine over a period of approximately 10 months.
8.2	Two turbines on the proposed layout for the Ubuntu project are located between two water resources and so lie on the flight path for birds between those water resources or wetlands. This is a cause of concern and the Trust requests that, if this facility is approved, these turbines be re-located. The layout on page 4-20 of the Draft EIA refers to these turbines as WEAO1 and WEAO2.	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	24/09/2011 email	See preceding comment.

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9. Socio-Economic Impacts

	Comment	Commentator	Date	Response
9.1	What is the BEE component and participation in the project?	Shaun Geswindt, Kouga Black Chamber of Commerce	23/09/2011 Pub Mtg	This information is confidential at present.
9.2	Wind turbines are specialised equipment and therefore job creation as a result of the project is expected to be minimal. This area has a very large unemployment rate, the project must ensure that it employs locals and develops skills in the area.	Shaun Geswindt, Kouga Black Chamber of Commerce	23/09/2011 Pub Mtg	This comment is noted. The project will have a positive impact on the local economy. Approximately 82 local jobs will be created during the construction phase and 10 direct jobs during operations. R1.6 billion will be spent during the construction phase. Please refer to Chapter 10 of the Final EIR for more details on the socio-economic benefits of the project.
9.3	What plans do you have to involve black business in your project?	Shaun Geswindt, Kouga Black Chamber of Commerce	23/09/2011 Pub Mtg	WKN Windcurrent welcomes all local businesses to apply to us with their offered services. These businesses will be sub- contracted provided their services will comply to the demand.
9.4	You need to emphasise the positive social impacts of the project.	Willem Gertenbach, Ratepayers Association	23/09/2011 Pub Mtg	Noted. See response to 4.2 above.
9.5	What are the economic benefits in terms of jobs that will be created?	Mfundo Sobele, ANC Kouga Sub Region	23/09/2011 Focus Group	During construction and operation there are various direct and indirect opportunities for local businesses. See also response to 4.2 above.
9.6	Does the applicant intend using local contractors during construction? Our experience in the area is that companies from out of town are appointed and they bring in their own plant and machinery which does not create employment for local citizens.	Elizabeth Perreira, adjacent landowner	19/09/2011 Tele consultation and email	WKN Windcurrent welcomes all local businesses to apply to us with their offered services. These businesses will be sub- contracted provided their services will comply to the demand.

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10. Heritage Related Impacts

	Comment	Commentator	Date	Response
10.1	Kouga is known to be a heritage area, it does not appear that you will be moving much ground, however if you come across fossils what will you do?	Shaun Geswindt, Kouga Black Chamber of Commerce	23/09/2011 Pub Mtg	The Palaeontological study concluded that the proposed wind farm is likely to have very little impact on the local palaeontological heritage (see Chapter 12 of the Final EIR) Should substantial fossil remains be exposed during development, these should be safeguarded-in situ, if feasible. The South African Heritage Resources Agency (SAHRA) and/or the Albany Museum should be alerted as soon as possible. A management plan for this will be implemented.

11. Noise Impacts

	Comment	Commentator	Date	Response
11.1	No mention is made of vibration as a result of the turbines in any of the studies, is this a factor to consider?	Charles Cook, Birdlife	23/09/2011 Pub Mtg	Vibrations of turbines via the foundation are limited. The soil around the foundation dampens the vibration within a few meters and will not be noticeable.
11.2	The noise is estimated to be 45 decibels, what is it that you hear, is it the blades or the turbine mechanism?	Abel Bezuidenhout, Private	23/09/2011 Pub Mtg	The noise of turbines is mainly from the aerodynamics of the blades. The sources of sounds emitted from operating wind turbines can be divided into two categories, firstly mechanical sounds, from the interaction of turbine components, and secondly aerodynamic sounds, produced by the flow of air over the blades. The latter is essentially the predominant audible sound. This can be compared to a swooshing sound.

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12. Project Detail

	Comment	Commentator	Date	Response
12.1	What is the minimum and maximum wind speed at which the turbines will operate?	Charles Cook, Birdlife	23/09/2011 Pub Mtg	Depending on the type of turbine to be used the cut in speed (minimum speed at which the blade starts turning) is at approximately. 3m/s and the cut out speed (maximum) at approximately 25m/s.
12.2	Where are the power lines to connect to the Melkhout substation indicated on the layout?	Maggie Langlands, St Francis Kromme Trust, Renewable Energy	23/09/2011 Pub Mtg	It is intended that the windfarm will be connected to one of the two 132 kV lines passing the site with a newly built substation next to the 132kV lines. (see EIA report for more details).
12.3	Have you earmarked a contractor and or supplier for the project?	Shaun Geswindt, Kouga Black Chamber of Commerce	23/09/2011 Pub Mtg	WKN-Windcurrent are in negotiations with several contractors/suppliers.
12.4	How susceptible are the wind turbines to fire, do you need to create fire breaks around the wind turbines to protect them from fire?	Willem Gertenbach, Ratepayers Association	23/09/2011 Pub Mtg	The turbines do not need fire breaks as the foundation and tower of the turbine consist of concrete and steel. In case of fire at the base of the turbine it will be inspected and maintained. All construction activities will be preceded with comprehensive full risk assessments and safe work procedures for each task as required by the OHSAct Construction Regulations. Risk assessments will include the identification and handling of hazardous materials as required by the Hazardous Substance regulations of the same act.
12.5	Who does the monitoring and maintenance work required on the turbines?	Jean Cook, Birdlife	23/09/2011 Pub Mtg	Specialised maintenance companies to the expense of the operator will maintain the turbines
12.6	Will this electricity be cheaper when compared to ESKOM?	Mfundo Sobele, ANC Kouga Sub Region	23/09/2011 Focus Group	The electricity from the wind farm will be delivered according to the PPA being underwritten as part of the RFP. The RFP entails competitive bidding on price, with a maximum tariff of ZAR 1.15 per kWh.

	Comment	Commentator	Date	Response
12.7	We are the adjacent landowner to the Ubuntu Wind Farm as indicated below, and raise the following concern	Elizabeth Perreira, adjacent landowner	19/09/2011 Tele consultation and email	The wind farm is not expected to have interferences with MTN towers.
	Adjacent Landowner 8/319 Adjacent Landowner - 5/320			
	I have an MTN tower on my property, will the wind farm impact in any way on the MTN tower on my property?			
12.8	Thanks for affording me opportunity to send the comments regarding the above-mentioned project on behalf of Eskom. <i>Reason(s) for the objection to the proposed</i> <i>Ubuntu Wind Energy Project:</i> Eskom lodged its applications for the project:	Lerato Mokgwatlheng, Senior Advisor Environmental Land Development Department, Eskom	29Sep2011 email	Comments from Eskom have been noted and are included in the Final EIA report (see last comment in Appendix G). As these comments were received after the closing date for the comments period, there has been little time for interaction with Eskom or SIVEST (the Environmental Assessment Practitioner appointed by Eskom for the powerline EIA) before the submission of the Environmental Impact Report.
	Thyspunt Transmission Line Integration (DEA Ref 12/12/20/1211, 12/12/20/1212 & 12/12/20/1213) to DEA in June 2008. The approval of the scoping reports was received in October 2009. The projects are currently on EIA phase, with their draft EIRs out for public review from 18 July 2011 to 10 October 2011. SiVEST as the appointed EAP for the Eskom's project, registered Eskom and itself on your data base as Interested and Affected Parties			The land owner on which the wind-farm is to be situated (Farm Zuurbron), Mr Jacques Steenkamp, has been in contact with SIVEST (Nicolene Venter) from the beginning of the process to plan the routing of the powerlines through his farm. Mr Steenkamp provided SIVEST with the appropriate map detailing the position of the wind-farm to enable a no-conflict routing, which is easily achievable on Mr Steenkamp's farm, given the dimensions of the property. He was informed that the wind farm would take preference over the transmission line routing. Mr Steenkamp stipulates that the last version of the powerline
	and provided the proponent with the shape files of Eskom's proposed corridors (i.e. Northern			routing, as discussed with him did not run through the portion of his property that is to be utilised by the wind turbines.

Comment	Commentator	Date	Response
Commentand Southern Corridors, each with an approximate width of 2km). The proposed Ubuntu Wind Energy Project transverses both corridors being proposed by SiVEST for Eskom's Thuspunt Transmission Line Integration Project.Please note that an EIA preferred alignment indicated within the proposed corridors (i.e. within the blue and orange corridors of the provided map) is not final, its only the consultant's recommendation in terms of the outcomes of the environmental studies. The actual line servitudes will only be finalised once negotiations has been completed with the landowners. This will commence if and/or after	Commentator	Date	ResponseAdditionally, it is noted that the Eskom comment is based upon a possible routing for proposed powerlines. These powerlines are intended to connect a possible Nuclear Facility at Thyspunt, to be constructed sometime in the future. Environmental Authorisation for this facility has not been granted.WKN-Windcurrent has an existing lease agreement with the owner of the property in question, Eskom has no agreement with the land-owner.Mr. Steenkamp and WKN-Windcurrent have requested a meeting with Eskom and SIVEST on site as soon possible to propose a power-line routing through the property that is satisfactory to all parties.
a positive decision has been granted by the authority. Therefore SiVEST's mandate is to request approvals of the two corridors, in which the 5 x 400kV power lines could be routed or placed on, should a positive decision be granted.			
the objection to the proposed application be addressed prior to finalisation of the Environmental Impact Report (EIR). Failure to this will result in the appeal of the Environmental Authorisation.			

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13. EIA and Public Participation Process

	Comment	Commentator	Date	Response
13.1	Has the exact layout for the site already been determined?	Abel Bezuidenhout, Private	23/09/2011 Pub Mtg	Three layouts are currently being proposed based on the capacity and rotor diameters of the individual turbines to be used.
13.2	Thanks for keeping me updated in connection with the above. I am no longer Chairperson of the Ratepayers but a Councillor of the Kouga Municipality. Please keep me updated. I would also ask you to keep one of my Ward Committee Members, Dr. Willem Gertenbach in the picture. The EIA'S will be his portfolio.	Cllr Henda Thiart	24/09/2011 email	The database has been amended accordingly and Dr Gertenbach has been included on the project database.
13.3	I assume that the Scoping Report has been approved and that you now ask for final input into the EIA Report.	Dr Gertenbach, Ratepayers Association	19/09/2011 email	That is correct. The Scoping Report was approved by the National Department of Environmental Affairs-see letter of approval dated 7 July 2011 in Appendix B of this report.

14. General and Project Support

	Comment	Commentator	Date	Response
14.1	We welcome and appreciate the development.	Mfundo Sobele, ANC Kouga Sub Region	23/09/2011 Focus Group	Comment noted and appreciated.