

TOESPRAAK : SIMPOSIUM : LUGBESOEDELING – UITDAGINGS IN SUIDELIKE AFRIKA :
26 NOVEMBER 1986 : W N N R KONFERENSIESENTRUM PRETORIA

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Meneer die Voorsitter, dames en here, vir my om vanmôre hier die verwelkoming sowel as die opening van hierdie Simposium te mag waarneem, is 'n voorreg.

Over the years it has become customary for our Association to have its annual simposium and general meeting here at the C S I R in these excellent facilities – you will agree it does give added status to N A C A which in these days of specialisation is so important.

To all our members here today – a special word of welcome. It is always gratifying to see so many of you here it shows the interest you have not only in N A C A but also in the papers which will be presented here today – remember without you, the members, our association has no future.

I also wish to welcome our speakers – thank you for agreeing to address us. The subjects chosen are very actual and we look forward to your contribution.

Ons nader vinnig die einde van die 20ste eeu Dames en here – die eeu wat altyd bekend sal staan as dié eeu waarop tegnologiese gebied die grootste veranderings plaasgevind het. Ja slegs 13 jaar bly oor voordat ons die 21ste eeu binnegaan – wat hou dit vir ons in? So min tyd en nog so baie om te doen!!! „Desmond Morris’.

In die mooi land van ons is daar soveel uitdagings veral met betrekking tot lugbesoedeling wat aangegryp moet word – ek noem hulle nie probleme nie – en daar sal net met optimisme voortgegaan moet word – daar sal beslis nie tyd wees om te sê – “Stop the world I want to get off” nie.

The national association for Clean Air of which we are so proud has been in existence for 17 years, 17 fruitful years, ladies and gentlemen where we as an unbiased link between the public and the authorities have played a vital part in making everyone aware of the importance of clean air. A big responsibility rests on our shoulders as the watch dog of the community and I am very much in earnest when I call on you all here today to take a much firmer stand as an association on all aspects of air pollution prevention.

Ons as mens is die oorsaak van lugbesoedeling en dit is slegs deur bewus te wees van die probleme dat daar werklik opgetree kan word – iemand het 'n baie waar woord gesê toe hy gesê het – “We have met the enemy and he is us!!”

Toe die blanke in 1652 voet aan wal gesit het aan die Suidpunt van Afrika het hulle nie besef dat hulle die lont aangesteek het van 'n tydbom waarvan vandag eers die implikasies van besef word dames en here. Om opvoeding, mediese wetenskap en beskawing te bring na 'n onontwikkelde land het probleme geskep wat met die tyd so groot geword het dat dit die voortbestaan van die land kan bedreig.

We are part of Africa Ladies and Gentlemen we are still a developing country with only a third of our total population of 26 million complying to educated and western norms.

Rene Diemont, a French Ecologist recently said that “Africa as a continent is busy dying – according to him a catastrophe awaits it which has since 1960, with the coming of Uhuru, through selfishness, bad management and the violation of the natural resources pushed the continent slowly but surely closer to a precipice.

The tremendous population explosion, the deterioration of the agriculture, over grazing and the destruction of the natural forests for fire wood has made it a continent without a future.”

Does it sound over harsh ladies and gentlemen? Therefore we here with the knowledge and the expertise are placed in a position where a valuable contribution can be made to our neighbouring states – where we can carry the message of the importance of the preservation of the environment as well as the importance of the quality of the air which we all breathe. Air pollution unfortunately knows no boundaries ladies and gentlemen.

Ons as land is besig om 'n fase binne te gaan van snelle verstedeliking – dit is 'n proses wat nie verhinder kan word nie dames en here. Daar word voorspel dat tot die jaar 2000 ten minste 13 miljoen swart mense nog sal verstedelik – besef ons die implikasies daarvan? Vyf stede so groot soos Johannesburg sal nog gebou moet word om al die mense te akkommodeer. Al die mense sal gehuisves moet word en van werkseleenthede voorsien moet word en daar kan nie gepraat word van kwaliteit behuising nie want die mense is sub-ekonomies en sal daar alhoemeer gekyk moet word na georganiseerde plakkery.

Op die oomblik het ons steeds rook besoedeling in ons swart stede – dit bly 'n groot probleem wat opgelos moet word.

We were all very optimistic that smoke pollution would be a thing of the past with the advent of electricity – but we all know that this is not happening. The potential smoke problem is enormous and it could become a major social political and economical issue.

It is estimated that 60% of all black housing will be electrified by 1990 – electricity however is expensive and the cost seems to escalate – to use it for heating purposes is not a proposition. Most of the homes in the black cities are not insulated – they are hot in summer and cold in winter and the burning of coal is still the only practical means of supplying heat. How then are we going to solve this very actual problem? We look forward to Mr Heyl's paper on this very subject. Have smokeless stoves been successful? Are they effective? What of their price? Are just a few of

the questions I would like to ask. I believe education and communication is very important.

Yes ladies and gentlemen shifting social standards play a large part in determining what seems to be environmentally unacceptable. Not so long ago industrial areas covered in a pull of black smoke and rivers choked with industrial effluent signalled economical growth and prosperity – fortunately today we have stopped being blind to the disastrous effects of such things.

Die gevolge van verstedeliking en bevolkingsgroei oefen 'n geweldige invloed uit op die leefwyses van ons mense. Vandag word ons hedendaagse mense meer gekenmerk as verbruikers en al hoe minder as produseerdes. Vandag is dit ook so dat meer en meer mense slegs ingestel is op oorlewing, so besig is om te werk dat daar min ag geslaan word op lugbesoedeling en die gevolge daarvan. Omdat die mens so 'n aanpasbare wese is kom hy dit nie eers meer na 'n ruk agter nie totdat hy die gevolge daarvan begin ondervind.

Can we in this country do without the motor vehicle? It has become a necessity and most middle to upper class families already need more than one car.

We in the modern age are dependant on energy to keep the world turning and it has been said that all the cars used throughout the world use 6% of all the energy produced.

This is mostly in the form not only of raw fuel but also in the materials used for its assembly and manufacture.

Vir olie om deur al die prosesse te gaan voordat dit by die diensstasie in die motor ingepomp word, gaan 1/5 van die oorspronklike energie verlore. Ons raak alhoemee bewus van die toename in motor uitlaatgasse en met die verstedeliking prosesse gaan die voertuie op ons paaie net toeneem. Om uitlaatgasse te bekamp en veral die lood inhoud daarvan te verlaag is 'n duur proses. Oorsee is al verskeie eksperimente onderneem om aangepaste engins te maak wat besoedeling vry is maar daar is gevind dat die selfs 15% brandstof kan gebruik. Daar is ook al na elektriese motors gekyk hulle is stadig en dink net aan al die batterye wat nodig sal wees om die miljoene karre aan te dryf – wat van die instandhouding van die batterye alleen en die lood nodig om hulle te vervaardig?

Loodvoorrade van die wêreld?

Lood word by brandstof gevoeg om die binnebrand enjin meer effektief te laat werk asook om minder brandstof te gebruik – die lood kom af in die uitlaatgasse en daar word al beweer dat ons mense stadig besig is om vergiftig te word. Sekere siekte toestande wat vandag vry algemeen voorkom en waarmee ons saamleef soos byvoorbeeld vaskulêre siektes, kroniese hoofpyne, brein atrofie, vermoedheid, groei vertraging by kinders en selfs impotensie kan almal tot 'n mate toegeskryf word aan die skadelike uitlaat gasse.

The USA today uses half its oil to produce fuel for its motor vehicles – in fact it devotes a higher share of its fossil fuel resources to the motor car than it does to meet the rest of its commercial needs Ladies and Gentlemen. Does it make you think Ladies and Gentlemen?

To my knowledge we have never had a paper read at this symposium about the influence of cigarette fumes on non-smokers. Today the smoking of cigarettes is prohibited in cinemas, theatres and non-smoking areas of our commercial airliners. People are becoming more and more aware of the dangers of smoking and it is gratifying to note that more and more men are kicking the habit – what is worrying however is that more women seem to be starting. But what of you and I who are compelled to breathe in somebody else's smoke. It has not been proved that it could cause heart disease but there is some evidence that it could cause lung cancer. Studies have suggested that non-smokers in a very smokey room can inhale enough nicotine and co in an hour to equal their having each smoked one cigarette. Most of us who are non-smokers have measurable amounts of nicotine in our body fluids which only gets there through passive smoking. Are we too polite to object when people around us light up? Although a smoker only inhales a maximum of 24 seconds when he smokes, his cigarette burns for 12 minutes and it is this sidestream smoke which causes problems for those around him.

The tobacco industry is a very important one in our Country Ladies and Gentlemen but I think that we as a society should also on the pollution aspect of cigarettes take a firm stand.

Vervaardiging van energie deur Kragstasies

In ons moderne wêreld het ons energie nodig om ons Kragstasies te onderhou om elektrisiteit te vervaardig om ons nywerhede aan die gang te hou. Die energie word hoofsaaklik verkry deur die verbranding van steenkool en terwyl ons nog afhanklik is van steenkool sal daar nog altyd lugbesoedeling wees – om die besoedeling af te bring na 'n aanvaarbare vlak – dit is die uitdaging. Ek is oortuig dat ons wel oor die kundigheid en die expertise beskik om dit te kan doen – Dames en here.

Onlangs het ek in die koerant gelees dat EVKOM nog 5 groot Kragstasies gaan bou om juis te voorsien aan al die behoeftes van die snel groeiende bevolking van ons land. Ek vertrou dat daar baie indringend gekyk sal word na alle aspekte van lugbesoedeling wat die aanlegte veroorsaak. Die elektrostatische presipitators blyk vandag nie so effektief te wees soos aanvanklik gedink was nie want hulle skep probleme met onderhoud. Sal daar meer en meer na sak filters gekyk word?

What will we use in place of fossil fuels in the future Ladies and Gentlemen?

The answer I think lies in nuclear energy which is virtually pollution free but brings other problems which could cause graver consequences. Ons onthou almal die Chernobyl ramp van 'n paar maande gelede waarby duisende mense in Europa geaffekteer is en nog lank in die toekoms die effekte daarvan sal ondervind. Daar is sulke uiteenlopende menings oor kern bestraling. Sir George Porter 'n gewese Nobel pryswenner vir Chemie het gesê en ek haal aan: "Man has not grown up enough to be trusted with nuclear reactors!!"

Tog aan die anderkant het 'n Amerikaanse reklame maat-

skappy beweer dat 'n kern installasie so veilig soos 'n sjokolade fabriek is!!

At the beginning of 1984 – 282 nuclear reactors were at work in 25 countries providing about 1/2 of France's electricity 38% of Sweden's, 16% of Japan's, 13% of the United States of America and only 6% of Russia's – interesting to note that Denmark and Australia have decided not to develop it at all!! Does nuclear energy really hold the key to the future?

How much radiation leaks out of a nuclear power station? What of the **waste material** it generates which can never be destroyed. Can the world really be trusted to use nuclear energy only for peace?

A lot has been written in the press about the dangers of asbestos lately and we look forward to the paper which Drs Du Toit and Ehrlich are going to present on this very actual subject.

Asbestosis is a lung disease which is caused by inhaling the microscopic fibres of asbestos by the people who in the course of their work cannot avoid breathing it Ladies and Gentlemen.

We all know that asbestos is a very useful mineral because when compacted and woven gives a heat and fire resistant material.

This makes it invaluable in the manufacture of textiles, brake and clutch linings and in the building industry.

Die simptome van die siekte is kort asem, gebrek aan O₂ in die bloed gee die kenmerkende blou kleur aan die gesig.

Ongelukkig kan die inaseming van die vesels ook kanker veroorsaak want hulle steek vas in die slymvlies van die longe en daar ontwikkel dan mettertyd 'n kanker gewas. Dit is dieselfde kanker wat rokers kan ontwikkel en werkers wat blootgestel is aan asbestof en terselfdertyd nog rook ook is dubbel aan die gevaar blootgestel.

Vandag word werkers deur die wet beskerm en streng maatreëls word getref wat betref die werksomgewing, beskermende klere asook die dra van maskers.

Baie vroeë is al deur die publiek gevra oor die gevaar van asbes in die alledaagse lewe byvoorbeeld die ysterstut op die strykplank of asbes sement water pype maar dit is slegs as dit in poeier of fyn vesel vorm voorkom dat dit gevaar inhou.

With increased urbanisation there is a greater demand for food and manufactured goods in our cities – are we over exploiting nature resources? Nature is wonderful, it can be subjected to a lot of abuse from which it in time will recover. But we must not fool ourselves that we can continue abusing our air and our environment – Nature also has its limits.

We are aware of the importance of economical growth to provide jobs for all our people but don't you think it is time for us all to take stock of our very lifestyle? To stop

making demands for a bigger and bigger variety of consumer goods. What worries me Ladies and Gentlemen is the vast quantities of paper which is produced and wasted in our country today – think of all the newspapers and all the wrapping paper used, the growing amount of computer paper. Surely our newspapers can be much thinner especially the Sunday papers where half what is printed is of no value. The cry goes up for recycling – all good and well but what of all the energy needed to reprocess it?

It is encouraging to know that N A C A is still a member of the International Union of Air Pollution Associations. It is of the utmost importance that we should continue to be a member not only because of the valuable information we get by being a member but also the contribution we make in the field of air pollution prevention.

I would like to thank our representatives who attended the International Congress in Sydney during August – we are proud of the positive image they so successfully projected not only of our society but also of our beautiful country.

We in South Africa are becoming more and more aware of the effects of Air Pollution and the very fact that research has been undertaken over a large spectrum is encouraging. We are grateful for the work done by The Department of Health and the Environment but I think that we as an association must speak with a louder voice.

We are of course looking forward to the newer more streamlined act which is being revised. This Atmospheric Pollution Prevention Act which was tabled in 1965 exercises national control by the best practicable means and not by definitely laid down concentrations with the result that it leaves the field wide open. It is important to revise the act from time to time to keep up with the latest developments. The **monitoring of emissions** especially by **local authorities** is important.

Ons in Kempton Park meet alreeds die stof deeltjies wat van ons nywerhede afkom baie suksesvol en daar word huidige ook gekyk na die meting van die onsigbare besoedeling wat soveel gevare vir die respiratoriese stelsels van ons inwoners inhou.

Die uitdagings vir u verbonde aan die Nasionale Vereniging vir Skoon Lug is groot en dit moet ons voorneme altyd bly om deur die foute van oorsese lande te leer sodat ons nie in dieselfde slaggate trap nie. Dit moet ons doel bly om die lug hier in ons land skoon en suiwer te hou nie alleen vir ons en ons kinders vandag nie maar vir die geslagte wat na ons kom.

Om J F Kennedy te kwoteer "Our problems are man made therefore they must be solved by man. A man can be as big as he wants to be and no problem is beyond him. After all problems are only opportunities in working clothes."

Once again a hearty welcome may your discussions be interesting and fruitful.

Dankie / Thank you