



Dutch **Turfgrass**
Research Foundation

Seminar summary

Sustainable turfgrass ecology management

Thursday 12 September 2013

NH Hotel Zandvoort, The Netherlands



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Opening



Tom van 't Hek opened the event. As a radio host of a daily business news show, sustainability is a subject that is discussed in his shows on an almost daily basis. It is turning into part of the daily business in various sectors. Not only from an environmental perspective but also from a profit perspective, it seems the general direction that sensible business is going. As an example he mentioned the development of the new cars by BMW that are nowadays marketed as green cars and not as fast and comfortable cars anymore.

Summary presentations

Recent developments regarding pesticides in The Netherlands and the why, how and what of the Dutch Turfgrass Research Foundation

Pieter Aalders, chairman Dutch Turfgrass Research Foundation

After the opening, Pieter Aalders, chairman of the DTRF mentioned the enthusiastic response to the invitation. The aim was to have about 50 participants and mostly national representatives were expected. The impressive international turn-up was a surprise and shows that the subject of sustainability is important and alive in the European golf sector.

He used the Dutch situation as an example of the challenge for the golf -and sportsector. The Dutch government is preparing a total ban on pesticides active as of 2017 for sport and recreation based on the EU directives. This administrative step is driven by the government's responsibility for public health and safety (food and environment) and biodiversity all of which are big topics. Economic interests are of course valued by politics but only after societal - and environmental interests.



To guarantee the playing quality of golf courses and sports fields for the long term, the Dutch organizations NGA, NGF, NVG and BSNC have joint efforts and have founded the DTRF. One of its main missions is to establish two inter-related scientific chairs at Wageningen University, one in turfgrass sciences and one in soil and water management. The focus of the DTRF is to coordinate and initiate research and education. It is a major addition towards the guarantee of playability in an unpolluted environment. A web portal is operational at www.turfgrass-sciences.com

> [Click here to see the presentation by Pieter Aalders](#)

Sustainable Golf in The Netherlands

Marieke van Rhijn, board member Netherlands Golf Federation (Sustainable Golf) and Dutch Turfgrass Research Foundation

Marieke van Rhijn explained the active involvement of the Netherlands Golf Federation (NGF) in the Golf Environment Organization (GEO) and the DTRF initiative. The Netherlands has some 180 golf courses of which 42 courses are GEO certified and 24 are OnCourse for GEO certification. Sustainability is a key topic for the Federation and is taken seriously with active support (financially, organizationally, communication and marketing) for the involved clubs and courses.

Sustainability is all about finding the right balance between the 3P's People, Planet and Profit. The process leading to sustainable golf needs a solid structure on every level, and joint focus on a basic management process: where are we today, where do we want to be in five or ten years from now and how do we get there. Commitment and communication are essential.

This is applicable at all levels, internationally, nationally and also locally (golf courses). The NGF takes its responsibility and invests in sustainability and turfgrass research. Open and constructive collaboration with other stakeholders is important because industry wide challenges need industry wide solutions. It can only be a joint effort, if we want to make progress. A lot can be learned from each other and there are many shared interests. In The Netherlands this has led to the founding of the DTRF and the collaboration with Vogelbescherming, the national partner of Birdlife Europe.

GEO associate member of ISEAL Alliance

Marieke mentioned that a major step has recently been taken by the international golf sector. GEO has been accepted as an associate member by ISEAL, the prestigious sustainability label. This has taken the discussion of sustainable golf to an even more credible level. Jonathan Smith and his staff were congratulated by Marieke for this important achievement that will benefit golf (applause).

Jonathan Smith (GEO)



BurgGolf Goes Green

On the national level there was also important news. BurgGolf, the largest commercial operator of golfcourses in The Netherlands (9 golfcourses) chose this event as the opportunity to publically announce that all of their courses will strive to get the GEO certificate within a year.

Ian Ouwerkerk, Managing Director Facilities and Marieke van Rhijn.

Golfers love birdies

Marieke finished her presentation with an explanation of the most recent campaign of the federations to get the golfer involved in the sustainability discussion, the Golfers love Birdies campaign which has been developed with Vogelbescherming. Dutch tour professional Joost Luiten has enthusiastically agreed to become ambassador for this unique collaboration.

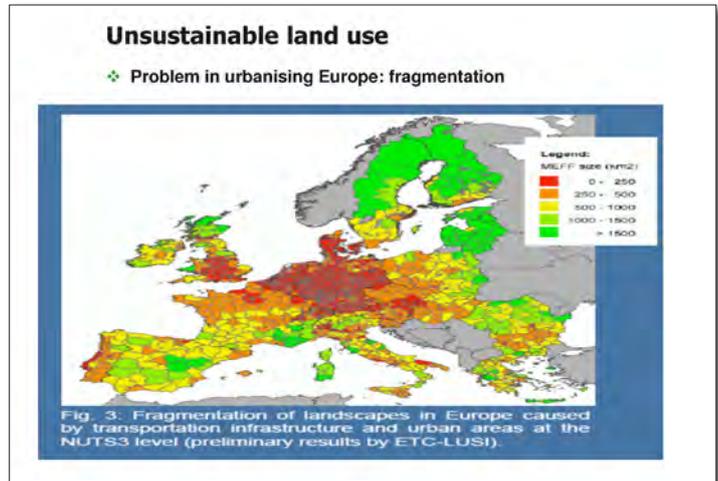
> [Click here to see the presentation by Marieke van Rhijn](#)



Biodiversity and the opportunities for the golf industry

Chris Boyd, Biodiversity unit, DG Environment, European Commission

Chris points out that it is not only a moral obligation to take care of our planet and natural surroundings for future generations but that there are also sound economic reasons. He uses wetlands as an example. Wetlands provide huge benefits such as resource for fish and wood (that actually have a recognized economic value). But wetlands also function as mitigation for natural disasters, waste treatment, climate regulation, recreation etc. Another example is benefits mankind has from natural pollinators like bees. These are all of major economic importance



Unfortunately biodiversity is not valued accordingly in our present economic system. It is all perceived as being free and available. This has resulted in a general neglect of biodiversity based on the principle of the Tragedy of the Commons. It is a key topic for the EU to turn that around.

A reason for the declining biodiversity is the urbanization of Europe, leading to fragmentation of natural habitats. Chris mentioned that there is a great opportunity for golf courses to function as green buffer zones next to urban areas. He pointed out that only a relatively small part of a golf course is actually used for the game, which leaves a lot of area to be used as natural surroundings with preferably a diverse flora and fauna. This provides benefits not only for nature but also for making a round of golf a more enhanced experience. Many golfers golf because they want to enjoy nature away from the daily stress.



According to Chris golf has an image problem and is often still perceived by the general public as a closed and exclusive fabricated 'habitat' with rich white males being the dominant species. Therein lies another opportunity for golf. At its core golf is a very social and open game. It can benefit the local community as a general meeting place in a green, social and healthy setting. That is good for society and good for golf. But the golf industry needs to take steps to bring this message across with credibility.

> [Click here to see the presentation by Chris Boyd](#)

STERF's programme and activities related to sustainable turfgrass ecology

Trygve Aamlid, vice chairman of the Scandinavian Turfgrass and Environment Research Foundation

Trygve is STERF's project manager for turfgrass research in the Northern countries as well as the organization's vice chairman. Trygve explains the bigger picture of environmental challenges that mankind faces in present times: climate change, loss of biodiversity and the disturbance of the nitrogen cycle.

For golf this comes down to the challenge of managing the golf course in a sustainable way with no, or minimal use of pesticides, balanced use of resources like minerals and water and guaranteeing playability in the face of climate change which involves unstable and more extreme weather conditions. Additional challenges are limiting CO₂ emissions and optimizing biodiversity. All these challenges have to be addressed within the framework of driving an economically sound business in times of crisis. STERF is prepared to meet these challenges and is doing this since 2006. Its focus is on applied research of turfgrass management. STERF is working closely with the national greenkeepers associations in the northern countries.

In principal the 900.000 Scandinavian golfers contribute funding of 0,5 euro per golfer (although not directly). Also national research foundations are willing to supply funding when the golf sector shows commitment and puts up initial funding. And last but not least, private organizations fund as well. The STERF programme has 4 key topics for research

- Integrated Pest Management
- Winter Stress management
- Sustainable use of natural resources, especially water
- Multifunctional use of golf courses

Trygve has no doubt that regulations are needed as the driver for change. This makes a pro-active approach by the golfsector necessary to make sure that the implementation of stricter policies does not lead to extreme consequences. A diverse strategy is needed: research on grass variety testing, optimizing fertilization and water management, weed control without use of chemical herbicides, minimal uses of pesticides etc. Trygve expressed skepticism about a total ban on pesticides. In some areas a total ban of chemicals maybe be reached but in other areas the focus may be better on minimalizing pesticide use (only one or two products are used I the late fall against snow mold). He thinks that fescues are an important part of the solution in the perspective of Integrated Pest Management





Trygve emphasized the importance of openness of a golf course towards the local community and toward multifunctional use of the facility/area (open for hiking, skiing horseback riding etc) .

There is proof that sustainably managed golf courses can indeed benefit nature. Research has indicated that some threatened species only live on golf courses

Furthermore he mentioned that sustainability efforts can indeed result in major savings. Successful water management research and practices have shown that

up to 60/70% of water can be saved without loss of quality.

Golf courses are involved in research and participate in setting research priorities. Almost 500 courses (out of 900) filled in a STERF questionnaire. Communication is vital in the process. Green-keepers should be involved through the organization of workshops, courses seminars and field days.

STERF has also developed an 'Industrial Scientific Partner' program for support from and collaboration with selected suppliers of products.

> [Click here to see the presentation by Trygve Aamlid](#)

Committed to Birds - On shared interests and opportunities for collaboration

Caroline Jacobsson, Head of Communications and Marketing of BirdLife Europe

Caroline explained the structure and focus of the organization of Birdlife Organization; its strengths being experienced and motivated local staff, supporters and volunteers around the world.

As BirdLife sees it, golfers and birdwatchers have a lot in common. Both kinds are outdoorsy, healthy, social, passionate and both have respect for nature's interests.

Birdlife Europe is eager to engage and wants to help the golf industry offer golfers and other visitors something more with their golf. Birdlife partnership can help to develop the game of golf across the world in a way that provides a richer experience, and a more valuable one by making wildlife part of the golf experience. Birds are not only popular wildlife but the only species that can be easily measured and counted. They are very good indicators of the quality of the natural environment.

Caroline emphasized that it is best to engage with BirdLife at an early phase of a golf development although collaboration at any time can lead to added value. Developers of golf courses and management are welcome to use the scientific capacity of Birdlife to increase activity in this area.

She also mentioned that Birdlife will be hosting an international event on 20 november in Brussels and asked the DTRF to mail invitations to the participants.



Sustainable turfgrass management as part of an unpolluted European environment

Violette Geissen, Priv. Doz. Dr. at Wageningen University

Every country has its own unique problems but we all face the same challenge and that is making turfgrass management more sustainable, using minimal inputs while guaranteeing playability. Seminars are important; knowledge can be shared, networks can be formed, joint research can be developed and results can be jointly evaluated and applied.

We all face choices. As an industry, golf has an influence, either positive or negative, on environmental quality. From manufacturing, processing and distribution of products, to the use of chemicals and fertilizer, to the cultivation of turf and seed and the way buildings are designed and managed, it all influences our world. Sustainable turfgrass management is a complex problem. It involves the ecology system water/soil and turfgrass and the correlation between these.

It is not only important to manage pests and water but also fertilization. The challenge is not only IPM but also IPNM (Integrated Plant Nutrient Management). It is necessary to look at the balance of bacteria, fungi, nutrients, water and air. The nitrogen surplus in the air and water in Europe has to be taken into account, this is often overlooked.

Sustainable turfgrass management is possible, however it still requires a lot of research; a lot of things are being done and already have been done; a lot of data is available. The challenge is to get a European picture of what we know, what we already can do and what needs to be further researched. Collaboration between scientific research institutions is necessary and information needs to be shared.

Although the problems and challenges may be different for different countries in Europe, the scientific concept is the same. It is about the different values of variables in the same scientific system within a certain environment. Scientifically it can be seen as a closed system.

> [Click here to see the presentation by Violette Geissen](#)

The practical perspective; balancing player demands and environmental interests

Martin Nilsson, head-greenkeeper Royal Copenhagen Golfclub, chairman Danish Greenkeepers Association

Martin has been closely involved, through STERF, in negotiations with government. His main responsibility is to maintain a pesticide free golf course (zero tolerance) in a Danish national park that is heavily regulated. Basically the public comes first, then about 2.500 deer and after that the golfers. It's multifunctional facility. The openness and multi-use has become part of the identity of the golf club.

According to Martin balancing player demands and environmental interests is definitely not easy. It is of course not true that it just requires an outstanding greenkeeper with excellent communica-

tive skills. Martin is very clear and gives his practical recommendations to DTRF, NGF and other involved organizations:

- Collect data on pesticide use, water use etc. Get it down to the bare facts: what does the average golf course use?
- Realize that the perception of sustainability by the outside world is different than within the golf sector. Remember that still 95% of the public does not play golf.
- Educate golfers on the maintenance aspects of golf courses. Unfortunately employers are mostly amateurs and are – in most cases - not educated in golf course maintenance. Once they start to understand (after a few years), their term is expired and they are substituted. This is a big problem. The learning curve has to start over. Precious time is lost.
- Involve greenkeepers in the scope of the research and use their advice on the various research proposals.
- Work closely with other research institutes. Collaborate openly, generally and internationally and share the research results.
- Research results and information should be easy to get to for greenkeepers. Scientists should be free and available for greenkeeper seminars and magazine contributions etc.
- Talk and write about greenkeepers and maintenance aspects of golfcourses as Federations. This gets the golfers involved and educated on the basics of greenkeeping and the challenges.
- Governments generally move slowly, but when they move they move fast and are not really paying attention to the details. Economic interests of the golf sector that may be important to us maybe not be important to others.
- About suppliers. They will defend the ‘old ways’ and protect their commercial interest. Do not mix commercial interest with scientific research results because greenkeepers will get suspicious and this can be harmful for the general direction and the common interest.
- The Dutch model with a good relationship between greenkeepers, managers, clubs and golfers etc. will be a cornerstone for success.

> [Click here to see the presentation by Martin Nilsson](#)



Full transcript of the panel discussion

Sustainable Turfgrass Ecology Management



Issues for discussion

- Activating engagement at local, regional, national and international levels
- The biggest common issues Europe wide - opportunities for collaboration?
- Developing alternative approaches and adaptation strategies - what exists, what's needed
- The economics – consequences for the affordability of golf
- Getting the golfer involved - both professionals and recreational golfers
- Moving beyond talking about the issues - coming together and really collaborating
- Ideas for how to work together - where can we go from here?

Panel members

Trygve Aamlid, vice-chairman STERF, [Scandinavian Turfgrass and Environment Research Foundation \(STERF\)](#)

Chris Boyd [Biodiversity unit, DG Environment, European Commission](#)

Antonio Bozzi, Chairman EGA Golf Course Committee [European Golf Association \(EGA\)](#)

Dean Cleaver, Executive Officer [Federation of European Golf Greenkeepers Associations \(FEGGA\)](#)

Steve Isaac, Director Golf Course Management [The R&A](#)

Lodewijk Klootwijk, Director [European Golf Course Owners Association \(EGCOA\)](#)

Ruth Mann, Head of Research [Sports Turf Research Institute \(STRI\)](#)

Violette Geissen, Priv. Doz. Dr. [Wageningen University](#)

Jonathan Smith, Chief Executive, [Golf Environment Organization \(GEO\)](#)

Hosted by programme chairman Tom van 't Hek

Opening statements

Steve Isaac, Director – Golf Course Management The R&A

“The R&A has been promoting and stimulating a sustainable approach to golf course development and management for 30 years. It has been a very interesting session so far and may I congratulate Martin Nilsson for such a common sense and down to earth presentation. He brought a lot of issues to the table that need to be addressed. **There are a lot of challenges, especially the need to implement existing best practices and knowledge** alongside gaining new knowledge.”

Ruth Mann, Head of Research of the STRI

“The STRI has been involved in research for a long time and I agree with Steve. The biggest problem is implementation and getting the right drivers to move sustainable management forward. Without those drivers it is very difficult to force managers to move forward.”

Dean Cleaver, executive officer for the Federation of European Greenkeepers Associations

“It has been quite an interesting day. The FEGGA was formed in 1996. When I look at where we were in 1996 from an ecology and environmental perspective at the time, I think we are being too hard on ourselves about what we have actually done - without saying that we have achieved all the answers; but we have started to tell a good story and shout about some of the things we are trying to do and work hard to do. When I try to think about sitting down with the Ecology Unit, which you could say now is GEO, we had a big job back then at trying to convince even National Golf Federations and other National Golf Organizations to become part of this and take it seriously. I think greenkeepers have always been the ones that have stimulated and driven the environmental aspects of golf course management forward. It is interesting that, with the last speaker (Martin Nilsson) we come to some basic elements. **There is nothing special about it. What we need to do is move forward and be more pro-active.** On a European platform we have a lot of tools that national bodies can use and they have to start using them because the support is like it has never been before.”

Chris Boyd, Biodiversity unit, DG Environment, European Commission

“Wonderful to see The Netherlands Golf Federation, the DTRF and other organizations getting together. **This is the kind of model for other countries** and hopefully it is spread in a more southwards direction.”

Violette Geissen, Priv. Doz. Dr. Wageningen University

“We have heard a lot of interesting things but one term has not yet been used - that is the ‘economy’. This should be part of the discussion. I would like to know from people here, how to combine economy and environmental requirements together and I hope this will be part of the discussion.”

Lodewijk Klootwijk, European Golf Course Owners Association (EGCOA)

“I think that is a good point for us as well. My name is Lodewijk Klootwijk. I work for the EGCOA and for the Dutch golf course owners (NVG). I see here written on the notepad in front of me “a thinner notepad means thicker forests”. As the golf industry we have to find these kinds of solutions. It gives me a good feeling using the pad and the owner of the hotel saves money with this. This is only a small and maybe silly example, but these are the things we should be looking for.”

And there definitely should be an economic incentive or it will be very hard. In this time of crisis this is the right time to do with partnership collaborations.”

Tony Bozzi, Chairman EGA Golf Course Committee

“I am Tony Bozzi, chairman of the EGA GCC and vice president of the Italian Federation and board member of GEO; but mostly, I am a golfer. I started playing golf in 1951. I think that most people in attendance here were not yet even born then. I would like to make a statement. This morning we heard our friend from STERF (Trygve Aamlid) saying that winter stress management in Scandinavia is the biggest problem for golf courses. It is safe to say, should you ask that question to any Italian greenkeeper, or to a Spanish or Portuguese one, the answer would be different. This is the point that I would like to make. The climate conditions are very different in Northern and Southern Europe and maybe in establishing limits of use in chemicals and pesticides and water use, we should keep in mind that **there are different needs in different parts of our continent.**”

Jonathan Smith, Chief Executive Golf Environment Organization (GEO)

“My initial thoughts are that the golf industry has been on a journey, like other sectors, that has been about understanding the breadth and depth of the subject. What is sustainability? Where does it begin and where does it end? How can you frame that so people will start to get it? Look only at what we have heard today. It is about birds, nitrogen cycle, water, runoff, social integration, climate change etc.. This sheer of breadth is a challenge in every sector. It does feel that people are starting to grasp the subject. We certainly have the right people in the room here. We have educators, researchers, communicators, suppliers and business people, standard setters and certifiers. **These are all parts of the jigsaw that industries put together to address this issue effectively.** It will be interesting to see that, instead of all working in our own little silo's, we can connect, research can bring knowledge, which feeds education and guides standards which feeds clubs that are more engaged, that are incentivized, that achieve a business benefit and that celebrate their business achievements. Other businesses are doing it. BMW is advertising the fact that they have done it and they have got it harder than golf, they are building automobiles.”

Trygve Aamlid, vice-chairman STERF Scandinavian Turfgrass and Environment Research Foundation (STERF)

“It was mentioned that there has not been much talk about the economy. On average 70% of Scandinavian courses suffer winter damage every year. I have been to courses this year where you could not develop a good playing quality until August - and that is a major issue that relates to economy. I think this aspect is important. That is why I was a little bit reluctant to say that golf can cope with a total ban on pesticides, especially in the case of Scandinavia, fungicides. **That will have a major economic impact at least in the short term.** For the long term through research and better grass varieties we will probably cope, but for short term we will have a problem.”

Tom van 't Hek, discussion chairman

“The problem now is, we are all enthusiastic, we are all believers but tomorrow is another day and we have to do something. We not only have to talk about it but we also have to act.’ So first the economic aspect. Who thinks that sustainability is a noble mission but it costs a lot of money and is hardly economically feasible on a short term?”

Jonathan Smith, Chief Executive Golf Environment Organization (GEO)

“I think these misconceptions are the ball and chain around sustainability’s neck. People think it requires – as I read the other day – a complete paradigm shift in the way you do business or that it is going to require a lot of technological investment or that it is time-consuming - like you would have to spend your time thinking about this, when instead you should think about your business. But what if it was part of your business, part of your day to day? So, at the moment **we have some real myths to bust about sustainability being risk management, expensive and a problem of challenge to overcome rather than seen as core to a successful business.** We need practical cases that show the latter to be the case.”

Chris Boyd, Biodiversity unit, DG Environment, European Commission

“This is a very important part. If we want to achieve a sustainable world we have to use profit. Profit is not a problem for the EU but we are only discovering slowly how to properly use it. One example is water pricing. You find in many Southern countries, there is very little water pricing. For instance in Spain you buy the rights to a stream but you don’t pay per liter of water that you use. What we are trying to push in Brussels at the moment is to start charging for water. I think golf courses, once they discover that they have to pay for every liter they put on their course, will start thinking about reducing.”

Tom van ‘t Hek, discussion chairman

“So you say, the same thing we see with the pesticides, when there is pressure applied by the outside, it is becoming a lesser problem because it is becoming more important economically.

Chris Boyd, Biodiversity unit, DG Environment, European Commission

“Yes, **it will become part of the profit motive** in a sense that if you want to make a profit with your golf course, you have to use relatively little water. But there is also a positive side. We are also working on the possibility of paying for biodiversity offsets. For example, you are an industry that is pumping some chemical into the environment which is killing a certain amount of biodiversity. A better example is probably a mining company, which is building a new quarry that is destroying a certain area of biodiversity. In order to pay to replace it somewhere, what would be a good candidate to replace? Maybe a golf course. **So you might even be paid in order to conserve biodiversity.** So this is going to bring in the profit together with the sustainable performance.”

Violette Geissen, Priv. Doz. Dr. Wageningen University

“I think there are economic chances in this concept. For example if you use less fertilizer you have less costs, if you use less water, you have less costs but that means actually we first need to have a base to exactly say what we need to get it economically well done.”

Tom van ‘t Hek, discussion chairman

“The more we know, the more data we have to prove that sustainability is very strong economically.”

Violette Geissen, Priv. Doz. Dr. Wageningen University

“I like the idea that is used in Scandinavia where – through the Golf Federations – an amount per golfer of 0,50 EURO is used for research. We should do something like that on a European level.”

Ruth Mann, Head of Research of the STRI

“This is one of the things we have to be very careful about and say that by using less fertilizer we can reduce the amount of money that we spend. It has all got to be from a complete holistic point of view because there are a lot of cases where applying less fertilizer can lead to disease pressure because the grass is weak, that leads to more fungicides applied. So **let’s try to get a holistic approach that works in your country, in your conditions and with your issues**. For example, we are talking about a ban on pesticides. But the EU directive is to minimize so we have to look for this holistic approach that works for each section we are in and then share understanding of all that.

Tom van ‘t Hek, discussion chairman

“You say, the more we know, and if we share all this knowledge, the more solutions we will have locally and nationally.”

Ruth Mann, Head of Research of the STRI

“Absolutely, **a lot of knowledge is already out there. It just needs to be brought together** and looked at it from each of the individual areas and we already doing that. We already work together and look up all the different aspects from a research point of view. Perhaps that we can use and try to bring it all together.”

Steve Isaac, Director – Golf Course Management The R&A

“Ruth made an interesting point there about existing knowledge. I think part of the problem is that **we don’t use existing knowledge**. I just use the example of grass cultivars. We have done a lot of work over a lot of decades to produce some excellent grasses. I think you can count on the fingers of one hand the number of golf courses who have sown the grasses and still have them as the dominant species five years into their management. **We seem to be very good in managing out the good grasses, yet we have the knowledge to maintain them.**”

Tom van ‘t Hek, discussion chairman

“You tell us, we have the knowledge but why is it so difficult to use it and share it?”

Steve Isaac, Director – Golf Course Management The R&A

“What we have to ask is, why don’t we implement current knowledge? A lot of that comes down to pressure; business pressure, golfers pressure, **it comes down to golfers expectations**. Those are the sort of things we need to address.”

Dean Cleaver, executive officer for the Federation of European Greenkeepers Associations

“I have been a greenkeeper for some 30 years now. When I look back over all these years I think that, in some respect, we are sort of generalizing and I think that **there are a lot of greenkeepers out there that manage their golf course in a very balanced way with very little budget** and all this talk about excessive use of fungicides and water etc. – I mean – I never hear of a greenkeeper bragging about the fact that he is spraying X amount of times because this is something that they don’t want to do. And golf courses can’t afford to do that anyway. So that is a reality, it is not something that we aspire to become. One of the things that concerns me is that with the pressure of the economic downturn there is a tendency to reduce budgets coupled with the fact that, when you look – and I see this in The Netherlands as well –, **we are giving away golf so cheaply**.

How is that going to be sustainable? So that is a big point for me in terms of providing a good condition to actually enable people to come and enjoy golf in the future.”

Trygve Aamlid, vice-chairman STERF Scandinavian Turfgrass and Environment Research Foundation (STERF)

“I can very much agree to what Ruth said about having a holistic view here because **the main question is what are the environmental impacts?** Nowadays we focus very much on pesticides but what about CO₂ emissions? Should greenkeepers turn to a lot of mechanical management as an alternative to avoid weeds in their fairways, using a lot more energy? Also, another example, this photo that I showed of a Swedish golf course, the fungicide trial. The greenkeeper said if he had avoided the fungicides here, he would have to use a lot more herbicides next spring because dandelions would come in at all those damaged spots. So we indeed have to have kind of a holistic view and minimize environmental impact on the whole. For example, in Denmark there was a person from the Ministry saying that they wanted to minimize or ban pesticides use . We confronted him with this information and talked about the CO₂ emissions and then he said, we should not bother because it’s a different legislation.

Tom van ‘t Hek, discussion chairman

“OK, I can imagine this frustration but we cannot solve that problem at this moment. It is clear to me that you all point at the same direction, you already do a lot and there is a lot of knowledge. But we now come to – what is maybe – the most important question: how do all those golf players get involved? How do they get to see this as a serious subject because I do not have the idea that, when I ask an average golfer in Europe about this, he will feel that this is a problem or an important thing. Am I right or am I wrong?”

Ruth Mann, Head of Research of the STRI

“You have to look at the playability of the golf course. If the golf course is playing particularly well and doesn’t have the issues of disease on the greens or insects of winter stress, than the golfer will tend to be quite happy. If they then can have an enhanced experience because there is an environmental quality, biodiversity, rich flora and fauna, of if he sees a rare bird for example, that will make it even better. **But the main aspect is playability the golf course, it has got to play well.**”

Lodewijk Klootwijk, European Golf Course Owners Association (EGCOA)

“I find the comparison with BMW interesting. They were known for their fast cars, and also fast fuel-consuming cars, and now they are selling green. They show that they understand it and that is how they sell their cars now. Now with golf, this is different.”

Tom van ‘t Hek, discussion chairman

“Right, that is my question. How do you get the golfer to understand that sustainability is important? How do you sell that?”

Jonathan Smith, Chief Executive Golf Environment Organization (GEO)

“That is indeed the real communication challenge and it is not easy. In fact, it is probably easier for BMW to put an ‘E’ on their car and market the greenness of their cars because what they were producing before wasn’t particularly green. So the consumer can see quite a stark contrast

between the BMW car that they had before and the one that is now green. What they have done very well, they have actually kept the quality of the car and the consumer's impression alongside sustainability. That is clever and that is important. But for golf, what you are saying is, that it is a different product, it is a different proposition and a lot of golfers already think that their golf course is green. So there is not a strong marketing message that one day you are a bad golf course and now you are a good one to golfers. So the nuance around this is very sensitive. We have just started a piece of work with Saatchi's sustainability team to try and get under the skin of this and this is part of the Eco-label messaging around pride and that feel-good feeling that you could instill, but **not just a green washing feel-good but a real feel-good that carries real messages to the golfers and out into communities.**"

Tom van 't Hek, discussion chairman

"Maybe not only the green washing but for instance in the Northern countries we have just been told that each golfer, through their Federation, contributes 0,50 EURO. At least they know they are paying something for a process like this. Is that a way to do something?"

Steve Isaac, Director – Golf Course Management The R&A

"I think getting golfers on board is a difficult one because at the moment we don't even have the key players such as the international golf administrative bodies, the national administrative level, and the local golf clubs buying into the sustainable argument. So we have to make sure that all of those people buy into it and that they understand the benefits that they are going to get from it, the economic benefits, the social benefits, the benefits of reputation, **the benefits of actually producing better playing surfaces through a more sustainable approach.** So we have to get the evidence for that and that means something that golf courses are not very good at, data collecting and promoting what they do."

Tom van 't Hek, discussion chairman

"But what do we need to do first? First that and later explain it to the golfers? Or do we have to do things equally?"

Tony Bozzi, Chairman EGA Golf Course Committee

"I would like to go back to the question of the golfers. Most golfers like to have a green course but I think that - if I remember well, it was 3 or 4 years ago - they played The Open Championship on Royal Lytham and St Annes and there was not a single spot of green. It was a very hot summer and the event was televised all over Europe and all over the world. Golfers were looking at the Open Championship played under those conditions. They realized that golf can also be played on a golf course which is not green and I think that that might help with **convincing the golfers that also other conditions can be acceptable to play good golf.**"

Violette Geissen, Priv. Doz. Dr. Wageningen University

"The countries in Europe are very diverse, so how do you convince a Norwegian golfer or an Italian one. This is completely different."

Tom van 't Hek, discussion chairman

"But you just explained with your presentation, because I already asked you that question. You said it was all the same, it is just matter of little differences."

Violette Geissen, Priv. Doz. Dr. Wageningen University

“Then I was talking about the **scientific concept of sustainability, that is basically the same in the different countries but if you ask me about communication strategy, it can indeed be completely different** and – as I understand- in Scandinavian countries they seem to be further in understanding that.”

Tom van ‘t Hek, discussion chairman

“Because people there are more involved in the issue, because it is a more general discussion in the whole country?”

Violette Geissen, Priv. Doz. Dr. Wageningen University

“I think the environmental aspects are more important and if you go to the South of Europe maybe the idea of sustainability is less developed.”

Tom van ‘t Hek, discussion chairman

“But how do we change? Because this is maybe the main issue, what are the critical factors?”

Violette Geissen, Priv. Doz. Dr. Wageningen University

“It is important to make it fancy to play golf on a course which is environmentally well done. If you can go as a tourist to southern Spain and say I am playing good golf the whole day while I know that the farmer next door has enough water to use.”

From the audience: **David Gomez- Spanish Golf Federation**

“Many golf course in Spain and Portugal are closed because there is a farm close to it and there is not enough water. That is one thing we are losing in the discussion here. **If you want to meet the expectations of the players, you have to use some pesticides.** In any part of the world, you have to use some pesticides. And the problem is the laws. The people from the government have to help us Everybody here came for the players and we have to meet their expectations. And the players want to play on a good surface and that is it.”

Chris Boyd, Biodiversity unit, DG Environment, European Commission

“On the players. I am a golfer myself. When I go to a golf course I want to get the best score possible and I am looking at playability. However, I don’t want to go home to my kids and then have my kids say, “Dad, how much water did you use this morning playing golf? How many butterflies were killed because of your round of golf.” I think **we are going to start seeing pressure**, from the NGO’s in terms of water use , we are going to start seeing pressure from NGO’s in terms of pesticide use and in terms of the biodiversity that is on our golf courses and that pressure will tell on players in the long-term. It might not be today but it will come in the near future.”

From the audience: **Rob van Springelen, Everiss, which is a fertilizer company.**

“I see all presentations and I see figures being thrown around, and I have my doubts. Because we see figures which apply to agriculture. The golf courses we play are fully grown, they have a root mass. So if you talk about consumable goods in this case, like pesticides or fertilizer, we have done trials with STRI and we have seen leaching data for fertilizers and also for pesticides that are more effective than what is used in agriculture. But what I see here is that we use figures which I do not

think are relevant for the case of golf. When we really have the figures of golf courses I think it will be clear that **golf is far more sustainable than many people think.**

Trygve Aamlid, vice-chairman STERF Scandinavian Turfgrass and Environment Research Foundation (STERF)

“I would agree with these last comments. We made an investigation in Scandinavia some years ago. The average pesticide use on golf courses was about 15% compared to normal cereal production and if you compare it to horticulture, it was even less. **But that is no excuse. I think we should really minimize further.**”

Tom van 't Hek, discussion chairman

“But before we start to talk about how many pesticides we do or do not use, I want to go back to the main direction of the discussion. I am not a specialist in pesticides. I want to focus on the general movement which is going on in the whole of society. Like Chris said, questions are coming to golf courses, are coming to golfers, pressure is coming. How do we handle that problem?”

Lodewijk Klootwijk, European Golf Course Owners Association (EGCOA)

“I am very much inspired but the 0,50 EURO per golfers in Scandinavia because **it is vital to involve the players.** These are our ambassadors, 390.000 registered players in The Netherlands and that can make the difference, if we educate them and make them understand then we will no longer have a problem. This is important because the pressure is coming and then you have an answer to your children about the butterflies and all.”

Tom van 't Hek, discussion chairman

“I am looking from the outside and I have a question. What does the average European golfer spend annually playing golf?”

Lodewijk Klootwijk, European Golf Course Owners Association (EGCOA)

“That must be about 1.500 EURO”

Tom van 't Hek, discussion chairman

“And you say that you are happy when only 0,50 EURO is going to the sustainability cause? I think this is strange. It may not be possible to ask for more but you do understand my point, I hope? Mr. Tony Bozzi, do you think I am crazy saying this?”

Tony Bozzi, Chairman EGA Golf Course Committee

“No, it is not crazy but I would like to go back to the question of water use which is to me very important. The way we are facing this issue, at least in my country, Italy, is to make a different choice in the cultivars we are using. I can say that in the Southern part of Italy all new courses being built now use warm season grasses and we have demonstrated that the amount of water that is used is – roughly speaking - 50% less, so that is a major saving.

Another advantage is also a lower amount of chemicals that is needed. So this is a point that we have to make to the golf community. The fact that **you can save money by trying to be more sustainable.** Now the next point, it is one thing to build a new course and use warm season grasses but it is another thing when you already have a course. To change the course from one cultivar to another is an expensive operation. Holes have to be closed for a certain amount of time.

Now finally I would like to add a point about the important role the golf course architect has in insuring sustainable golf because if you design a course to be sustainable it is much easier to manage it compared to if you are trying to adapt existing practices to more sustainable processes. **So the role of the golf course architects is of paramount importance.”**

Tom van 't Hek, discussion chairman

“That is indeed also a very important group.”

From the audience: **Demie Moore, Aquatrols and Wageningen University**

“I want to go back, Tom, to your question about how we get to that movement, that flow into the future and I heard from a number of you - and I think many of us would agree - there is already a lot of information, as we have said. But why is not more of that put into practice? Is it fear of the costs of it? Is it lack of getting it out? Is it lack of communication? And we talk about doing more research to generate more information so that we have information showing that things are good; we have to find out how we can even get it better. Perhaps one of the things the DTRF and the collaboration hope to spur or motivate is in fact to get those stories told. To collect the information from GEO-certified courses or other sources that already exist and, by that, we can then communicate to the golfing public that playing conditions can be great on different kinds of golf courses. Tell the stories, we then also identify where we do not have enough information and that can give the direction to research for the future. We keep saying - and it is said in other places -, we have the information, it exists, you save money doing these things. **Let's get that down and tell the story. I challenge everybody to collaborate on that.”**

Ruth Mann, Head of Research of the STRI

“One of the things we definitely need to do is, **we have to allow people to take baby steps.** We tend to say that to be sustainable, you have to do ABC and it's the elite sustainability saying that. But when you are a golf course for want of a better use or very poor, to achieve that level or even believe that you can get there, is so far away. But allowing the baby steps and showing or demonstrating on how you can get there of just the case studies to show how to get better, you may not get to that elite but still bring that pesticide use down from 4 to 2, and that is much better than where they were. We should show them how they can do that.”

Tom van 't Hek, discussion chairman

“OK , I understand what you are saying. I once talked to a guy that climbs mountains. He said that **when you start, you don't have the energy to reach the top, but you always have the energy to take the next step and in the end you have reached the top.** That's what you are saying. Interesting”

Dean Cleaver, executive officer for the Federation of European Greenkeepers Associations

“Is it a question now really, is it a reality, to actually get golfers - first of all - to buy into sustainability because, as Ruth has said, what they are interested in, is turning up, playing their game on a golf course that is playable. Now, as a first step to try and reach out to golfers and to actually get them to buy into this, is it not more a reality to first of all get the clubs to buy into this? Steve kind of touched on this in his first comment. Because they are the people that create the structure within their own club, they are the people who can communicate a message from us to their members.

I actually went and played golf at my old golf course just last Monday. It has been 13 years since I was there. When I worked there we made great in roads in actually looking at environmental golf course management, we had annual seminar days and we really reached out to the members. Since I left, the club structure is totally changed, and it has been allowed to change. You have got new people there, so therefore the philosophy that they had has all been lost. So I think that **one of the most important things, is actually having a good structure that the club adopts** and it should be a structure that cannot easily be changed.

One more thing in regard to pesticides. We all keep talking about pesticides and I think that , you know, there are comments that say we all agree but I don't think that we do all agree. I think that one of the things that we have got to agree on is, do we believe that pesticides are part of a good golf course management structure? Because until we agree on that, we are just going to be talking around and around. For me, representing greenkeepers, **I truly believe that pesticides are part of a management regime, and what we do, we use them carefully, we use them sensibly and we actually use the right kind of products.** Because it is a whole big scenario, Ruth has already touched on this in terms of annual meadow grass on golf courses, we have looked at the Northern European Golf Courses and how they actually have to deal with weather elements. Back in the UK it is exactly the same; in some parts you cannot just blanket the whole situation. You have to look at it in a realistic way as part of management.”

Steve Isaac, Director – Golf Course Management The R&A

“If you are asking, what can we practically do? In every golfing nation in Europe, I think there is a National Greenkeepers Association,, there is a National Golf Federation. **I don't see it beyond the realms of their capacities to identify 10% of their golf clubs who are operating in a sustainable way.** And why can't they use those exemplars to encourage others to follow that route. You will have to have a cross section of types of golf courses. But every country I go to I see some golf courses where I think Good God, are they really doing that? And I go to others where I think WOW, this is a very good example.”

Tom van 't Hek, discussion chairman

“So you think the good examples have to share more of their knowledge and have to be more open.”

Steve Isaac, Director – Golf Course Management The R&A

“They have to share their knowledge, they have to be highlighted by National bodies as good examples and good examples that are producing what golfers want, producing what the environmentalists want, as well as what the greenkeepers want.”

From the audience: **Martin Nilsson, Head-greenkeeper Royal Copenhagen Golfclub, chairman Danish Greenkeepers**

“I am getting a bit anxious now, because this is actually, for me, sort of a rewind of our own negotiations in Denmark in our own industry before the legislation hit us. I think we just have to accept it. When governments and legislators move, they move fast and with force. So, considering the economic impact, we are not actually using any pesticides compared to agriculture, but that doesn't matter. **This is a meteor hitting a swamp in North America where two dinosaurs are sitting; they are not considering the economic impact of this. This is just, accept it and try to survive for a while.** When we have started to accept, we need to figure out how to survive in

our different countries, when in Spain or Portugal, you may not have the problems with fungicides, but when you start battling about water with, for example, the farmer next to the golf course, about water because he cannot have water for his tomatoes or his wine, then they will get upset and then the NGO's will and then suddenly, to them, the community, it doesn't really matter what 5% of Portuguese population that plays golf thinks, 95% is not playing golf, and they want water."

Tom van 't Hek, discussion chairman

"So it is already decided? We don't even have to be defensive. It has already started and we have to focus on finding the solutions with each other?"

From the audience: **Martin Nilsson, Head-greenkeeper Royal Copenhagen Golfclub, chairman Danish Greenkeepers**

"Accept the situation. But realize that in The Netherlands and in Denmark, and France, when you go for a pesticide ban, that's the meteor other countries have other problems. And another thing, finally, is that being sort of a sustainable greenkeeper is not a very easy job. It is not just about - well you can just do it, go on and manage your course in a theoretical way. It is a battlefield out there. So you need to protect my peers. Steve is saying a bit of that, but **if you want a greenkeeper to go down that route, you really have to support him.** Not just the first two months, when you have diseases in the summer, it has to be the whole way. That is why I want to ask you, how are you going to protect my colleagues? Because they are doing the right thing."

Chris Boyd, Biodiversity unit, DG Environment, European Commission

"I am not sure who that question is directed to but I am very pleased to hear that you think government moves quickly sometimes."

Tom van 't Hek, discussion chairman

"You can go back to Brussels, Chris, and tell them they are moving too fast."

Chris Boyd, Biodiversity unit, DG Environment, European Commission

"But there is also a quote from Bismarck: "Laws are like sausages—it is better not to see them being made" and there is actually a lot of truth in that because you make mistakes making laws. We are going to make proposals in Brussels that are based on misperceptions. Perhaps we do think somehow that tomato or orange farmers in Spain are getting less water because of golf courses - because that is the perception we have. And a lot of the pressures in politics come from inaccurate perceptions - but they are nevertheless the realities of politics; and golf courses, clubs, greenkeepers, designers etc., everyone around golf is going to get faced with these perceptions. This is why, I think, **you need to work before things start happening in Brussels in order to make sure that things move on.**

On what exactly we should do, and we have heard a lot of suggestions, in my view, it is always going to be some carrots and some sticks. We are going to need a lot of education, of communications, it is clearly very important to tell people how to do things if we know how to do them. But we are also going to need some laws, we are also going to need some sticks and that is going to come sooner or later, we see it already on pesticides"

Jonathan Smith, Chief Executive Golf Environment Organization (GEO)

"We hear regularly that we need a lot of research, we need a lot of education, we need a lot

of communication, we need a lot of this and a lot of that and we have to come back to your point, Tom, where do the resources come from for that? **What golf is actually investing in sustainability is quiet small** by comparison with the way other industries have invested in sustainability, if we are honest about it at the moment. So the decision is actually going to be quite tough for the organizations that are sitting around this table, each of whom has a role to play. But what is the next move? Is it going to be 4 million to research, is it going into engagement to get continuity in golf clubs with clubmanagers and superintendents working together or is it going into marketing and communications?”

Tom van 't Hek, discussion chairman

“What is your idea? Where do we have to put the next million?”

Jonathan Smith, Chief Executive Golf Environment Organization (GEO)

“To bring this back to The Netherlands, saying now we are here, I think there is actually, a good trajectory that the NGF and the Dutch industry are starting to show now, which is a lot of knowledge, some research agenda area's which are innovative and need to be looked at, but not researching everything for ever and ever and ever, because maybe you get to a point where you know enough to actually take some action. But in the Netherlands, good research, good education, good leadership by the golf organizations, they have turned it from a risk management area (let's wait for regulations), to something pro-active positive. They are combining voluntary and regulatory adaptation, they have got courses using the OnCourse programme and other national criteria, International and National voluntary standards, and golf's ecolabel GEO Certified™- and they are bedding that into clubs - and of course this takes time, 10 to 15 years in many sectors - bedding it into decision makers and clubs and what has that done? The Netherlands shows that this can be done quickly and effectively.

This has created a platform where people start to grasp what sustainability is. To overlay that Dutch model now with some really exciting marketing and communications to make people feel good about it, to draw sustainability even harder and faster into the industry than any of the regulators could ever do or that any researcher could do, would be a real complement and that is knowledge based, empowering clubs to be better governed, **find business benefits and then golfers to finally get the message. And all this is actually happening in the Netherlands.**”

Tom van 't Hek, discussion chairman

“So we don't need to have this discussion. What you are saying is, just follow the Dutch.”

From the audience: **David Gomez- Spanish Golf Federation**

“In Spain and in Portugal, I was just talking to the president of the National Federation, if you want to build a golf course, you have to prove to the authorities that you will not go take the water for farms. Another question I want to ask you is, why don't we turn it around and ask how many deer have actually been killed by applying pesticides on a golf course?”

Tom van 't Hek, discussion chairman

“I understand your question but we are going to talk about that when we have a drink later. Then we will have the pesticides discussion again. I want to come back to what has just been said because we have a lot of knowledge, we all agree on that and there is already a general direction which

a lot of clubs, a lot of good people, a lot of good greenkeepers etc. are working in. How is this movement going to get stronger? Because I think that is the main challenge.”

Violette Geissen, Priv. Doz. Dr. Wageningen University

“**It would be a very good opportunity to make a European platform.** If we could get funds, someone should be looking into this. This platform collecting all the various subjects and all the knowledge we already have in Europe, greenkeeping knowledge from practice and scientific knowledge and then looking at what we all know about the different countries and then working on the concept of sustainability. We can collect the data and experiences we have got and to convince golfers about the concept of sustainability.”

Tom van 't Hek, discussion chairman

“But I still have this question, because golfers are the end-users. Now you say, first the organizations have to work on it and the end-users will follow while in all other industries they first start to do something with the end-users.”

Violette Geissen, Priv. Doz. Dr. Wageningen University

“That is a misunderstanding. We first of all need to know what we know. We have to collect what we know and, I agree with Ruth, that **we already know a lot but it is not well distributed.** It would be very useful to collect all knowledge and then we can say OK, we have a concept that can be applied in different regions. Before that, we cannot start to convince golfers because we don't know what we are going to convince them about.”

Trygve Aamlid, vice-chairman STERF Scandinavian Turfgrass and Environment Research Foundation (STERF)

“We have heard from Martin Nilsson that the Danish government was moving fast. **I would say to the organizations in golf, move even faster.** What happened in Sweden, they took the lead, once the directive for Brussels came, they formed a platform, and developed a program and this actually was moving faster than the government and the government said, can we use this, can we apply this to get the necessary change.

What also happened was actually that the golfers suggested themselves that some pesticides should be banned and three new ones with less active ingredients were recommended for application. With this, the total amount of active ingredients has been lowered dramatically but they still have some protection.”

Tom van 't Hek, discussion chairman

“So be pro-active and go back to you own government and say, we want to talk and take initiative.”

Tony Bozzi, Chairman EGA Golf Course Committee

“I am really convinced that, overall, we in golf are doing a good job for sustainability. We did improve very much over the last few years. The weak point is that we are not seen, to be doing all that we are in fact doing. We are not recognized. **The general perception of golf outside the world of golf is not positive** and I think that, we have to make an effort in order to tell everybody what we are doing and what we achieve with this. In Italy, two years ago, we started to have some contacts with environmental organizations, WWF and so on, and we succeeded to convince them that we are starting to do a good job. Unfortunately, we did convince the central organization but

not the people in the regions. They are still convinced that golf is bad. So, I am pleased to go back from this meeting with the knowledge that Mr. Chris Boyd, European Commission DG, Biodiversity, is saying that 'golf, more than being a part of the problem, could be part of the solution of the problem.'"

Tom van 't Hek, discussion chairman

"That is a nice conclusion but now everybody outside of golf has to believe that as well. That is the next step you will have to make."

Chris Boyd, Biodiversity unit, DG Environment, European Commission

"I am positive, it was the conclusion of my speech and I truly believe this, but the word 'could' is important. Golf 'could' be part of the solution and indeed Jonathan points this out to me. In Brussels, regulation is seen as kind of last resort, the stick when really nothing is going on at ground level and so, when you see voluntary initiatives happening like for instance the GEO standards for golf courses, that is the kind of thing where you say, OK let's give that a chance, or perhaps a little more, let's check that these standards are proper standards and if they are good standards and if they are properly adopted than why get involved. Leave it, because **golf knows best what's good for golf.**"

Tom van 't Hek, discussion chairman

"So as long as you realize you have to change and take the necessary steps, you will not be forced to change by Brussels?"

Chris Boyd, Biodiversity unit, DG Environment, European Commission

"Absolutely, as long as it seems to be working, you will see a lot less pressure."

Tom van 't Hek, discussion chairman

"Will you go back to Brussels and say positive things about golf because it is doing a lot of things already?"

Chris Boyd, Biodiversity unit, DG Environment, European Commission

"I will certainly go back to Brussels and will say that a lot of things can happen in golf and a lot is going on, whether it is successful or not, then we come back to what Steve is saying, **we don't really know how much water golf is using, we don't really know how much pesticides golf is using.** Maybe there is a false problem. Some people out there are saying we don't have a problem of leaching of pesticides and leaching of chemicals. Maybe that is true."

Tom van 't Hek, discussion chairman

"So your advice is, you have a lot of knowledge, bring this together and start to talk about it."

Chris Boyd, Biodiversity unit, DG Environment, European Commission

"**Voluntary standards are very important.** We need to meet those standards, we need to have standards that are realistic and standards that are ambitious enough to make things move forward. We have to measure what we are doing."

Tony Bozzi, Chairman EGA Golf Course Committee

(referring to Chris Boyd's previous statement that "golf knows best what is good for golf" jokingly asked him) "Can't the regulators say in Brussels that it will apply for recreational areas except for golf. Because golf takes care of itself? If you can, I think that will be very good"

Jonathan Smith, Chief Executive Golf Environment Organization (GEO)

"There is a practical example of this. In the marine industry, The Marine Stewardship Council came together to take stock of all the knowledge. All the stakeholders came together and said OK, what do we know about fisheries, what standards are we setting for our own industry? Last year the EU deferred to the Marine Stewardship Council certification program on the status of Mackerel stocks in the North Sea. So the industry sets the standards, reasonable and accessible but with a strong ambition to drive, not only the elite but to drive continual improvement on every level, accessible for everybody. If you get that formula right, that becomes self-regulation. But golf wouldn't be doing this just for regulation reasons. Golf is doing it because for every golf course owner, nature, water, energy, supply chain, community integration and pollution prevention - guess what, there's a huge benefit in every single one of those area's."

Tom van 't Hek, discussion chairman

"My last question. Let's say that you are all European Minister of Golf for one day and you have to take one decision. You have all been here today and listened to the presentations and the discussion and you have to do one thing for golf. What will you do? Otherwise we will all leave here with a good feeling, looking back on an interesting discussion and next year I can come back again and we will do it all over again. We need some action now. What will your next step as Minister of Golf?"

Steve Isaac, Director – Golf Course Management The R&A

"If I was in that position I would say **let's actually find out what goes on on the golf courses.** We have knowledge but we do not actually know, generally speaking across Europe, what we are applying to our golf courses. Denmark is very different. Denmark has a lot of information. Also the French have a lot of information. The French situation is actually interesting. They have agreed to go for a 50% reduction in pesticide by 2018. Now 50% of a lot is quite a lot!"

Trygve Aamlid, vice-chairman STERF Scandinavian Turfgrass and Environment Research Foundation (STERF)

"**We have to communicate the knowledge we already have.** What we have been measuring actually in terms of leaching of nitrate on golf greens. This is all in compliance with the EU nitrate directive on drinking water, except when we have dead grass."

Ruth Mann, Head of Research of the STRI

"One of the big things is for each of the countries to look who your representative is in Brussels as well. In the UK, we have formed an umbrella group called the Amenity Forum and it brings together all the different aspects of Amenity, which is huge in the UK. We have our representative and he goes to Brussels and we get to put forward, what we believe are our problems, where we are and a lot of the initiatives that we have done and the aspects that we are looking. This means our representative in Brussels well understands what we are looking at in the UK and where we are."

Tom van 't Hek, discussion chairman

“OK, so the first thing is to bring up all the information and the second thing is to have a good lobby, somebody who knows really what is going on in the business and can tell that.”

Ruth Mann, Head of Research of the STRI

“And the other thing is benchmarking. Again in the UK Amenity Group will look at where golf is for the first time. Next year is going to be benchmarked properly from the pesticide application point of view. So we actually then see where we are.”

Lodewijk Klootwijk, European Golf Course Owners Association (EGCOA)

“And then we have to make sure that all the solutions that you centralize are being implemented. With all the research that is being done and with all the centralization of information, we have to make very sure that it comes down to the place where it matters, at the golf course. **Research has no value when it is not implemented.** So we have to make sure it gets value by getting it implemented on the golf courses.”

Tony Bozzi, Chairman EGA Golf Course Committee

“Let me add, when our EGA Golf Course Committee was established 5 years ago, the main task or the main objective that we had was to establish contact in Brussels with the European Commission in order to have advanced notice about what they were planning to do and I believe that has been achieved and I think the fact that we are having advanced notice is very important because we have time to react, we have time to study, we have time to take action. Now after 5 years of experience we can maybe take a more pro-active role and use our lobby in order to tell them what we are doing. Now coming back to your question of what I would do as Minister of Golf in Europe tomorrow morning, I would try to spread around the news about the good things that we are doing because that is not recognized enough. **We, as golf, are doing much better than people think.**”

Violette Geissen, Priv. Doz. Dr. Wageningen University

“It would be very important to collect all the data we already have, then we can make an estimate of how sustainable golf really is. How high is the amount of pesticide leaching, of nitrogen leaching in the different countries? What is the role of golf? Maybe we find that golf is only 0,5% of all the contamination, maybe we find that it is 30%, we don't know now. As I understand we do not have that information at this moment. **We need to know what is the effect of golf on the environment.**”

Tom van 't Hek, discussion chairman

I have another question, because we are all very enthusiastic now to share this knowledge but who is calling who tomorrow? Or does the NSA already have all this information? Who will be collecting the information? Who is calling who?

Tony Bozzi, Chairman EGA Golf Course Committee

“Steve, can you do that for us?”

Steve Isaac, Director – Golf Course Management The R&A

“The first thing to say is that lobbying is all well and good **but it has to be evidence-based and I think that that is where golf falls down at the moment.** But I think there is a network in

golf to collect this data and it is through the National Federations and the National Greenkeeper Associations who represent golfers and greenkeepers. They have the ability to go out there and collect this data.”

Violette Geissen, Priv. Doz. Dr. Wageningen University

“But if you want to collect European data, you will need some organization to oversee this.”

Steve Isaac, Director – Golf Course Management The R&A

“Well, we also have the European Golf Association.”

Violette Geissen, Priv. Doz. Dr. Wageningen University

“I think it would be good to have a form of funding. For instance 1 EURO per golfer in European. We could have maybe two or three people engaged in collecting the data in an active way for all of us.”

Tom van ‘t Hek, discussion chairman

“Well, it is an idea. It is already twice the amount we have just heard.”

Jonathan Smith, Chief Executive Golf Environment Organization (GEO)

“I am going for a different data representation, a different form of that. If I was Minister of Golf for one day, I would announce a new policy which was that every general secretary and managing director or CEO of every golf organization insisted that in every country, within three months, every golfclub publish publically – not ‘let’s keep the data’ but publically - unless they have something to hide, which you shouldn’t, but tell us if you have - publically publish a sustainability statement in the public domain. And do so transparently every three years and we will provide the industry with an already made format to make sure you cover all the issues. This will do more than anything to drive the performance of clubs, and demonstrate golf’s value to communities and the environment.”

Tom van ‘t Hek, discussion chairman

“It is funny that you mention this because today in The Netherlands is the first day in the history that a Dutch hospital is going to make public all its performance data. They say, we have to do this, we have to be transparent, we have to open up our communication. And guess what, a lot of hospitals got calls today from people asking for the same information. So that seems to be developing in a very fast way. So it is interesting that you mention this.”

Jonathan Smith, Chief Executive Golf Environment Organization (GEO)

“You can read the information and you can feel free to criticize to your heart’s content.

Sustainability works, we have 42 courses in The Netherlands doing exactly that and they are quiet happy to publish. If you want to criticize them and say they are failing, then do so. If you want to write them and point out that they should do better or if you think that their standard are not strong enough, then do so. This is all a continuum but until that info is made public then we would all, even in this very room, fail to understand the individual challenges and opportunities that every golfclub has and indeed they are different from Spain to Denmark, but they are also different from Copenhagen GS to Horsham GC. So we have to tell the stories of what people are doing at their clubs.”

Tom van 't Hek, discussion chairman

“You are saying this on the day that the Dow Jones Sustainability Index is published. This is the index where all the big firms publish their sustainability data. And I am proud on this occasion, to say that KLM- Air France is the most sustainable airline in the world.”

From the audience

From the audience: **Marieke van Rhijn, board member Netherlands Golf Federation (Sustainable Golf) and Dutch Turfgrass Research Foundation**

“Well, we have heard many interesting topics today and many parties involved and what I see as the most important step forward now, is to bring all these parties together. They are together here today - but to get them into tangible results and tangible cooperating, that is a challenge because **sustainability is not a blueprint**. It is individual for each golf course , for each country, for each sector. But I think we can find a way and if I look at today - Ruth said that sustainability is a matter of baby steps - but I think that today we have made a big step forward and the Dutch Turfgrass Research Foundation is at the heart of what we, in the Netherlands, think we can do in terms of sustainability and I hope we will make big steps. It is important to start working together in a tangible way and move forward.

(applause)

Tom van 't Hek, discussion chairman

“Well, we have almost come to the part of the afternoon where we can all have a little drink but I want to ask if any one of you has got something to say that is so important that is has to be said here, today, now. Something that is even more important than having a drink. Maybe we missed something?”

Violette Geissen, Priv. Doz. Dr. Wageningen University

“I would like to thank the organization for this excellent seminar.”

(applause)

Steve Isaac, Director – Golf Course Management The R&A

“Can I just say, how nice it is to have someone like Chris Boyd here, someone from outside the golfing fraternity. We are very good at talking within golf and it is indeed nice to have politicians, people who make legislations, NGO representatives from outside golf, who –hopefully – listen to all we have to say. **But also we have to listen to what they are telling us.**

(applause)

Tom van 't Hek, discussion chairman

Yes Chris , thank you very much; and of course thank you to all other participants in this seminar, speakers and panel members. Can I please ask all speakers to join us here in the front because we have a small token of appreciation for your role here today. And then I hand over the microphone to Pieter Aalders, chairman of the DTRF , for some final words.

(applause)

Pieter Aalders, chairman Dutch Turfgrass Research Foundation

Pieter invites everyone present to actively take a step forward in sustainability and get in contact with someone else about it. He mentions that the DTRF will also take a next step and will

communicate about this to all stakeholders. The promise is that the seminar format will be repeated.

He thanks the panel members and the speakers for their excellent contribution. He then thanks Tom van 't Hek for his enthusiastic discussion and interview skills and Demie Moore and NGF staff member Joris Slooten for their contribution to the organization of the event and - last but not least – he thanks the audience for being present and for their active participation. He wishes everyone a safe trip home and invites everyone to have a drink.

(applause)

GOLFERS BIRDIES

...and eagles and albatrosses

and goldfinches and kestrels

and swallows and woodpeckers

and little robins and...

Joost enjoys his birdies like any other golfer – and knows that golfers are the guests in the landscape where birds live.

Birds are sensitive indicators of the health of the environment and sustainability, if things are good with the birds, things are good with the surrounding green area. Golf and the natural landscape are inextricably connected to one another. Golf courses have always been recognized for their natural beauty and serenity; the silence occasionally broken only by the swish of a club or the warbling of a native bird. It's part of what gives golf its timeless power of attraction.

Birds give character to golf courses with their colors and songs – and contribute to the experiencing of nature during a round of golf.

Management of a golf course therefore needs to include – along with attention to playing quality – care for the nature and landscape on and around the course. A truly healthy sport set in nature, the golf industry is rising to meet the challenge for sustainable golf - to optimize the playing quality of the golf course, in harmony with the conservation of its natural environment. That's good for the planet and good for golf.

Multiple European Tour winner **Joost Luiten** is ambassador for the Committed to Birds programme, developed by Birdlife Netherlands and Netherlands Golf Federation. The programme focuses on sustainable development and management of natural habitats on golf courses.



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