

# **Contents and importance of environmental questions for the management and maintenance of the Golf and Country Club Seddiner See**

**Horst Schubert - CEO G&CC Seddiner See AG**

**David Duke - Course Superintendent G&CC Seddiner See AG**



# Aerial photograph 2003



## Environmental management 250 years ago

**„A well educated person makes nature his friend.“**

Friedrich Schiller

## Quality and environmental management from three different perspectives:

... from the perspective of the members or golfers

... from the perspective of the golf club

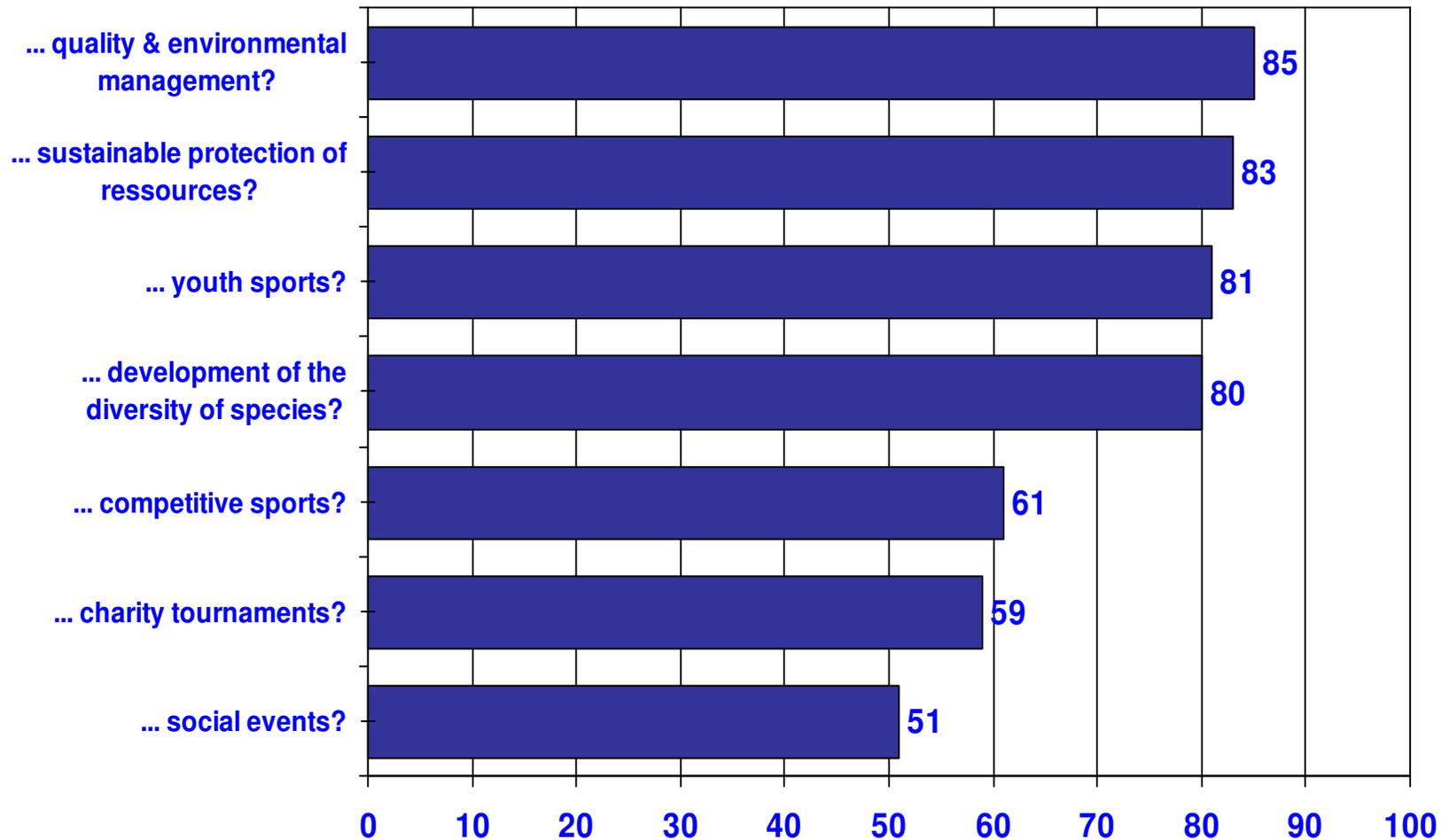
... from the perspective of the German Golf Association

# Quality and environmental management from the perspective of the members

Results of the market research survey among the members of the Golf & Country Club Seddiner See (february/march 2010)

# Question 14a: How important is the club's involvement in ...

Top Two Boxes (= portion of evaluations „important“ und „very important“)



## Quality and environmental management from the perspective of the golf club

Club philosophy of the Golf and Country Club Seddiner See:

**„Transparancy, efficiency and sustainability are the objectives as well as the substance of company policy, with particular importance being placed upon quality and environmental management. As a result, among other things, the preservation and care of nature, and as far as possible the protection of natural rессources are the central concern for the running the golf club.“**

## Quality and environmental management from the perspective of the German Golf Association

- a) incorporated the requirement of environmental protection into it's articles in 2010
  
- b) development of the quality and environmental management programm „golf and nature“ since 2005

## Participation at the quality and environmental programm „golf and nature“

- 2005 registration and inventory
- 2006 development plan and implementation
- 2007 bronze certificate
- 2008 silver certificate
- 2009 gold certificate
- 2011 review of the agreed activities

# Gold certificate „golf and nature“



## The „golf and nature“ team

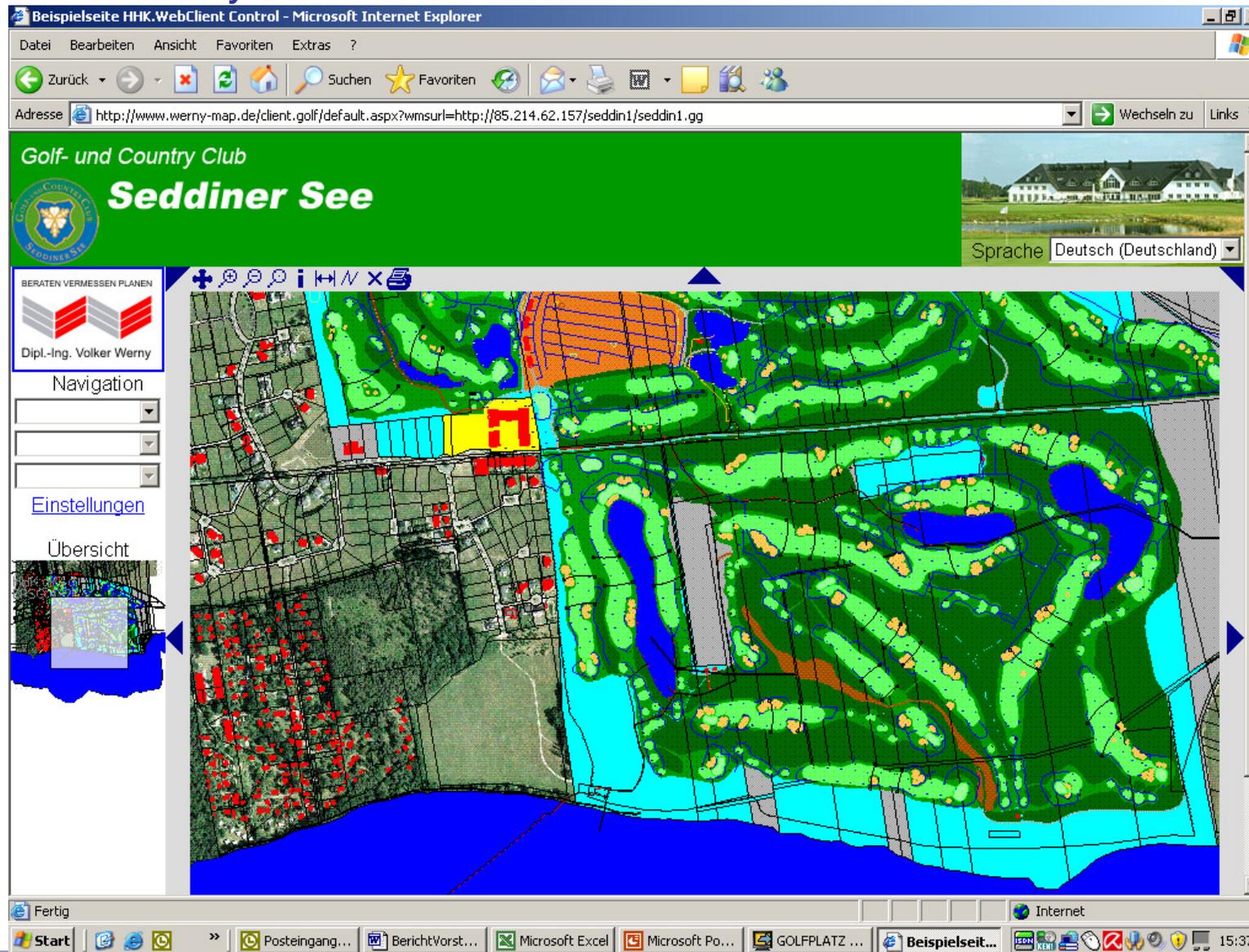
- chairman of the supervisory board
- chief executive officer
- Course Superintendent and first assistant
- building developer
- external experts (e. g. Prof. Dr. Olaf Mietz)

## Our factors for success

- **transparency**
  - **efficiency**
  - **sustainability**
- in both **quantitative** as well as **qualitative** terms,
- in both **commercial** as well as **ecological** sectors,

# Transparency in quantitative terms

## GPS land survey



# Transparency in qualitative terms

fauna & flora survey 2007/2008

Institut für angewandte Gewässerökologie GmbH  
Leitung: Prof. Dr. habil O. Mletz



Floristisches und Faunistisches Fachgutachten  
GOLF- UND COUNTRY CLUB SEDDINER SEE  
Teil II: Faunistisches Fachgutachten



Institut für angewandte Gewässerökologie GmbH

Seddiner See im November 2008



# Survey of the diversity of species



## Comparison 1991 / 2008

	1991	2008
<b>number of species (totally)</b>	<b>113</b>	<b>323</b>
<b>Flora</b>	<b>63</b>	<b>122</b>
<b>„Red List“</b>	<b>7</b>	<b>10</b>
<b>Fauna</b>	<b>50</b>	<b>201</b>
<b>„Red List“</b>	<b>8</b>	<b>62</b>

## The key factor „sustainability“

Member's satisfaction with the quality of the golf courses

Results of the members surveys 2003 and 2010

	2003 good / very good %	2010 good / very good %	Improvement 2003 / 2010 %
<b>North course</b>	72,3	80,6	<b>8,3</b>
<b>South course</b>	82,0	89,0	<b>7,0</b>

# Golf & Country Club Seddiner See

In the beginning.....

## Construction of

- Two 18 hole golf courses
- Driving range and short course
- Exclusive villas and apartments



## Culture Shock....



**Golf u. Country Club Seddiner See – April 1996**

# Professionalism From The Start...

- Master Greenkeeper (BIGGA)
- Audubon International Cooperative Sanctuary
  - First golf course in Germany to be awarded certificate.
  - Began process in 1998 and awarded certificate in 2000.
- Certified Golf Course Superintendent (GCSAA)
- Golf & Nature
  - Bronze, Silver and Gold
- The Leading Golf Courses of Germany



# Golf & Nature

- Test of all aspects of Golf Course
- Environmentally-friendly personnel & membership
- More than just being Green
- A complete survey of the clubs methods – inside & out

# The Leading Golf Courses of Germany

- Independent and Anonymous inspection performed by “mystery” players.
- Performed up 18 times a year.
  - Course
  - Facilities
  - Gastronomy
  - Staff
- Done from a golfer’s perspective.



## Vision of Quality

- Environmental
- Financial
- Personnel
- Provide Members and Guests the best product achievable.



# Vision of Quality

- **Environmental**

- Our job is to preserve and protect the wildlife in and around the course.
- Provide natural habitats for all species.
- Prove to the locals that a golf course does not harm, but enhances and protects the environment.
- Monitor and record plants and wildlife at Seddiner See
  - Began recording data in 1996.
- Provide outreach programs to schools and organizations.
- Tree Sponsorship program.

# Vision of Quality

- **Financial**

- Forward planning
- Use of Trims Course Management software to record and monitor.
- Re-investment

## Modern and Up-To-Date Machine Park



# Vision of Quality

- **Personnel**

- Develop a trained and motivated staff
- Utilize staff cost effectively and efficiently
  - Reduce full-time staff
  - Increase seasonal staff
  - Schedule work hours to reduce conflict to players and those living around course.



## Vision of Quality

- Provide Members and Guests with a Top Quality Golf Experience
  - Maintain the highest standards year round.
  - Constant inspection and refurbishment.
  - Continued improvements to course and facilities
  - Membership survey.

## Design plays a factor in our maintenance costs

<b>Bunkers</b>	<b>Number</b>	<b>Hectares</b>
North Course	92	,5
South Course	84	1,6

<b>Bunkers</b>	<b>Average Hours/Week</b>	<b>Method</b>
North Course	25,5	Hand Raked
South Course	51	Machine Raked

**These factors effect our overall costs**

# Fairways

- North Course
  - Fescue 12 Hectare
- South Course
  - Southshore Agrostis 16 Hectare

60% of Fairway overall costs are on the South Course

70% of Nitrogen is used on the South Course

# Review on a Regular Basis

- Examine cost differences between courses
  - Design
  - Grass Species
  - Size of Fairways

## Fertilizer Application

	Fair-ways	Greens	Tees	Semi-Rough	Total	%
North Course	54,5	193	43	10	300,5	38.35
South Course	204,5	201,5	68,5	8,5	483	61,5

	North Course	South Course
Fairways	21%	79%
Greens	49%	51%
Tees	39%	61%
Semi-Rough	54%	46%

# Environmentally Friendly Management of our Lakes

- Water Testing
- Electro Fishing the Lakes
- High Quality Fertilizers
- Buffer Zones
- Low Chemical Inputs on course



# Monitoring Water Usage

		Water usage.														
		Last Numbers 08	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total for year	
Water from Seddin Pelicon Meter		2105637	2105637	2116880	2140920	2193475	2240718			2392514	2446602	2457278	2457278	2457278		
<b>Shut down</b>	7th Oct		0	0	24040	52555	47243			151796	54088	10676	0	0	340398	
Water from Seddin MID 1		1977373	1977373	1988616	2001348	2053753	2100996	2151285	2201543	2252373	2306579	2317255	2317255	2317255		
			00000	00000	12732	52405	47243	50289	50258	50830	54206	10676	00000	00000	328639	
Hold pond to LSA MID 2		629232	629232	629260	629279	636041	643555	689588	730836	730875	730896	730896	730896	730896		
			0	0	19	6762	7514	46033	41248	39	21	0	0	0	101636	
To LSB MID 3		18071	18071	18071	20112	27291	27291	27569	27569	27569	27569	27569	27569	27569		
			0	0	2041	7179	0	278	0	0	0	0	0	0	9498	
From LSB		52271	52271	52271	54330	67726	67726	68143	68143	68143	68143	68143	68143	68195		
LSB to north			0	0	2059	13396	0	417	0	0	0	0	0	52	15924	
Wells Total MID 4		178825	178825	178825	178825	178825	178825	178825	178825	178825	178825	178825	178825	178825		
Wells to Seddin Lake intro			0	0	0	0	0	0	0	0	0	0	0	0	0	
Wells to weiher zum Weiher			0	0	0	0	0	0	0	0	0	0	0	0	0	
	MID 4	3108	3108	3108	3108	3108	3108	3108	3108	3108	3108	3108	3108	3108		
Wells to Nord E Source pot			0	0	0	0	0	0	0	0	0	0	0	0	0	
LSA&B to LNE MID 5		408323	408323	408323	409675	415451	419529	440349	465182	470926	471759	471763	474479	474530		
					1352	5776	4078	20820	24833	5744	833	4	2716	51	66207	
Water to Seddin MID 7		1348141	1348141	1359384	1372069	1417713	1457440	1461698	1471698	1521499	1575690	1586359	1586359	1586359		
<b>System start up</b>	01.04.2010			0	12685	45644	39727	4258	10000	49801	54191	10669	0	0	227003	
	Wells meter.	129900	129900	129900	129900	129900	129900	129900	129900	129900	129900	129900	129900	129900		
			0	0	0	0	0	0	0	0	0	0	0	0	0	
Rain fall MM.			14	16	33	8	53	10	27	45	130	18	73	28	455	
Flowtronex flow sensor Süd		Actual.2009	46439	46439	46439	49724	52469	68264	86789	91364	91575	91983	91983	91983		
			46439		0	3285	2745	15795	18525	4575	211	408	0	0	45544	
Flowtronex flow sensor Nörd			36229	36229	36229	39404	42569	52518	67330	70436	70640	70581	70581	70581		
					0	3175	3165	9949	14812	3106	204	-59	0	0	34352	
					6460	5910	25744	33337	7681	415	349				79896	
North course lake fills		Stand as of Jan 09	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec		
Zum Weiher		800			774	1081	1082	1202	1733	1733	1733	1733				
					0	307	1	120	531	0	0	0	0	0	959	
LNA		383			203	203	288	515	639	642	642	642				
					0	0	85	227	124	3	0	0	0	0	439	
LNB		634			1447	1447	1447	1447	2447	2447	2447	2447				
					0	0	0	0	1000	0	0	0	0	0	1000	
LNF		907			1979	2067	2283	2283	2436	2165	2165	2165				
					1072	88	216	0	153	-271	0	0	0	0	1258	
LNG		2			1	1	1	1	1	134	134	134				
					0	0	0	0	0	133	0	0	0	0	133	
															3789	
Records From Rainbird		Virtual #														
North course			0	0	0	2002	2432	15184	17527	5289	1182	1797	1896	0	47309	
South Course			0	0	0	3751	3167	22610	24273	7628	1879	3343	2626	0	69277	
Short Course			0	0	0	228	217	864	1009	195	101	64	92	0	2770	
Other area north			0	0	0	473	569	2171	2992	516	282	337	329	0	7669	
Other area South			0	0	0	101	94	657	678	94	59	0	138	0	1821	
<b>System shut down on</b>			0	0	0	6555	6479	41486	46479	13722	3503	5541	5081	0	128846	
		For the year														
Water to North Co MID 5+Q17+Q12		66207	0	0	0	19172	4078	21237	24833	5744	833	4	2716	0		
Water to South Co MID 2		101636	0	0	0	6762	7514	46033	41248	39	21	0	0	0		

# Golf- und Country Club Seddiner See

