Gender and Education Define Why Diaconal Employees Fail to Implement Lutheran Church Environmental Policy

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A thesis presented in partial fulfillment of the requirements for the degree of **Master of Science in Ecology**, Department of Ecology and Natural Resource Management, The Norwegian University of Life Sciences, Ås, Norway.

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Declaration

I, Anniken Torset, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature……

Date……

Preface

During my last five years of studies, I have repeatedly challenged the controversial interdisciplinary field between ecology, development studies and religion. In 2010, I started a master in Ecology, but I also accepted an offer to study Diakonia at the Norwegian School of Theology (MF). In the Evangelical Lutheran Church of Norway (ELCN), diakonia includes environmental stewardship, together with social work. The possibility to work both with environmental and humanitarian issues triggered me, but I soon realized that stewardship, as part of diakonia, was a controversial issue at MF. Coincidentally, I came across a local diaconal plan that, like all local plans, had to include the four main pillars of diakonia: *loving your neighbor, creating inclusive communities, protecting creation and fighting for justice.* Under the headline *Protecting creation* I found one bullet point: raking grass at the cemetery. How did this contribute to protect creation? I later learned that many deacons are unwilling or struggle to include stewardship in diakonia. A seed was sown for my master thesis.

Some issues discussed in this thesis are concrete, like environmental practices; others are abstract, like the term "stewardship". Consequently this study required complex qualitative and quantitative analyses. Therefore the thesis is not written in the common report form, but in a two-paper format. The papers resemble two main chapters, and should be read in order. Note that definitions given in Paper I, are not repeated in Paper II.

Through the process of research and writing my supervisor, Professor William S. Warner, has been of great help and support. He deserves the warmest of thanks for insightful conversations and advice, for edits, patience, and for believing in me even when I did not. I also want to thank Solveig Karin Norheim Eriksen, Tendai Chella, and Cori Keene for editorial comments; Lars Kåre Grimsby and Hans Ole Ørka for statistical advice; study leaders Tron Fagermoen, Tormod Kleiven and Kari Jordheim for the interviews; Kristin Müller Nilssen for commenting on surveys, and survey respondents for taking the time to fill out the questionnaires. Last but not least I want to thank my lovely family for their care and support.

Ås, December 2012

Anniken Torset

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List of Abbreviations

Abbreviation	English
ELCN	The Evangelical Lutheran Church of Norway
M	Mean
P	P-value
SD	Standard deviation
MOE	Margin of error
v.s.	Value scale

List of Basic Definitions

Diakonia: ”Diakonia is the caring ministry of the Church. It is the Gospel in action, expressed through loving your neighbor, creating inclusive communities, protecting creation and fighting for justice” (Den Norske Kirke, 2008: 7).

Diaconal ministry: A local unit working with diakonia.

Deacon: Employee with an ELCN accredited graduate degree in diakonia. ELCN deacons are in charge of the local diaconal ministries.

Deacon worker: Employee in charge of a local diaconal ministry, but without an ELCN accredited graduate degree in diakonia.

Deacon advisor: Employee working as the diocese’s advisor in diakonia.

Diaconal employee: Collective term for deacons, deacon workers, and deacon advisors.

Stewardship: Humans’ responsibility to manage and protect the environment for any given reason.

Biospheric stewardship: Humans’ responsibility to manage and protect the environment for the sake of all living beings.

Value orientation: Explains WHY someone holds something, in this case stewardship, valuable.

Biospheric value orientation: Considering stewardship valuable because it protects all living beings.

Social altruistic value orientation: Considering stewardship valuable because it contributes to reduce global environmental problems harming humanity.

Local value orientation: Considering stewardship valuable because it adds something positive to a limited group of people, which the diaconal employee is part of, e.g. the local congregation or local community.

Evaluative attitude: A person’s general opinion of something - if it is good or bad, right or wrong.

Affective attitude: A person’s emotional perception of something.

Cognitive attitude: A person’s conscious perception of something.

Conative attitude: A person’s disposition to act based on the evaluative, affective and cognitive attitude.

Why does the Church Care for the Environment?
Value Orientation Among the ELCN's Diaconal Employees

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Abstract: In 2007, the Evangelical Lutheran Church of Norway (ELCN) included environmental stewardship in its definition of diakonia. In the ELCN's national plan for the diaconal ministry, it emphasizes nature's intrinsic value, and highlighs that stewardship is a biospheric commission. Neither before nor after ELCN's new definition and plan of diakonia was established, has research examined value orientation among local diaconal employees. Using a survey based upon the New Ecological Paradigm (NEP) and Schwartz value scale, information on value orientation from 115 deacons, deacon workers, and deacon advisors was gathered. Because the Schwartz scale does not measure local value orientation, additional data from another survey designed for Paper II in this thesis was used. A majority of the survey respondents held an altruistic, rather than biospheric, value orientation, indicating that ELCN biospheric policy has low support among local diaconal employees. Correlations with demographic factors were considered, but varied too much to fully explain value orientation.

Key words: Diakonia, Environment, ELCN, NEP, Schwartz value scale, value orientation

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1. INTRODUCTION

As global ecological problems increase at critical speed, growing numbers of research suggest religion to be part of the solution (Gardner, 2002; Gottlieb, 2007; McKenzie, 2005). Science can explain habitats and species threats, along with possible solution. Economy can assess profit of protection of species and habitats with value to humans, but what about species and habitats that are not? This is where religion enters; it has the ability to value nature intrinsically (Rolston III, 2006), i.e. to assess nature's value in itself for itself. If intrinsic value exists in religion, religion can offer a strong justification for biospheric stewardship.

Biospheric stewardship is humans' responsibility to manage and protect the environment for the sake of all living beings. It is more specific than the general term, stewardship: humans' responsibility to manage and protect the environment for any given reason, e.g. human gain. A rising acknowledgement of the eco-theological justification for biospheric stewardship was among the core reasons why the Evangelical Lutheran Church of Norway (ELCN) began the process of redefining diakonia, the church's caring ministry (Den Norske Kirke, 2008; Kirkerådet, 2006). The ELCN is Norway's largest religious organization, and 77% of the population are members (Statistics Norway, 2011). Consequently, the church has a large potential to impact the environment, both directly through daily administration, and indirectly through political influence. In 2007, the ELCN officially left its anthropocentric diaconal ministry in favor of a biospheric ministry, when the General Synod approved the following definition of diakonia: "Diakonia is the caring ministry of the Church. It is the Gospel in action, expressed through loving your neighbor, creating inclusive communities, *protecting creation* [italics added], and fighting for justice" (Den Norske Kirke, 2008: 7)[1].

The new definition and plan for diakonia changed ELCN's diaconal policy, but no research has been dedicated to study its effect on local diaconal practice. As confirmed in this thesis, diaconal employees have much freedom in their work (see Appendix E, Q8). If they are not willing to acknowledge biospheric stewardship as their task, the ELCN may remain with a diaconal ministry not willing to walk what the Church talks.

[1] Authors translation

Willingness to act voluntarily is often based upon value orientation, which this study divides in three:

- Local value orientation: Considering something valuable because it is beneficial for a limited group of people, which the diaconal employee is part of, e.g. the local congregation or local community.
- Social Altruistic value orientation: Considering something valuable because it contributes to the well being of humanity (De Groot & Steg, 2007).
- Biospheric value orientation: Considering something valuable because it contributes to the welfare for all living beings (Hansla, Gamble, Juliusson, & Gärling, 2008).

This paper explains why most diaconal employees are driven primarily by anthropocentric values, despite the ELCN's biospheric value orientation.

2. MATERIAL AND METHODS

2.1 Research Instruments

This study was based on quantitative and qualitative data samplings from two cross sectional surveys, and interviews with the study leaders from Norway's two master programs in diakonia.

Survey A (Appendix A) included questions regarding value orientation, attitude, and behavior. The questions varied between open answer, priority scales, semantic differential (Likert scales), and polarized questions. The survey was sent to deacons, deacon workers, and deacon advisors. Deacons are responsible for the local diaconal ministry in a congregation, parish or deanery, and have an ELCN approved graduate degree in diakonia. Deacon workers work as deacons, but lack graduate education. Deacon advisor are employed at the Episcopal offices to supervise the diocese's employees in diaconal matters. They do not necessarily have a degree in diakonia, but they generally have post-graduate education. When writing about deacons, deacon workers and deacon advisors as a group, they are referred to as diaconal employees.

Survey B (Appendix B) formed the basis for this paper. It consisted in two internationally recognized standards for measuring value orientation: The New Environmental Paradigm (NEP) and Schwartz' Value Scale (v.s.). There are several

versions of NEP, but this study used the original 15-item scale, according to Hawcroft and Milfont's (2010) recommendations. The 15-item scale was divided into five themes: growth limits, anti-anthropocentrism, nature's vulnerability, management and responsibility, and perception of eco-crisis. Each item formed a statement, and response was given with a Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Items 2, 4, 6, 8, 10, 12, and 14 were reversely scored, because max pro-environmental agreements for these items are 1 (strongly disagree) rather than 5 (strongly agree). Items were summed to calculate total NEP .

Schwartz' V.S. was used to measure respondents' altruistic and biospheric value orientation. In this study a shortened version of the scale, which Groot and Steg (2008) developed for a similar study, was used. Like the NEP scale, Schwartz' V.S. consisted of items, which respondents rated agreement with. The Likert scale ranged from -1 (opposed to my values) to 7 (extremely important). In accordance with Schwartz' (sine anno) recommendations (as cited in De Groot & Steg, 2007), respondents were encouraged to vary between scores, and rate few values as extremely important.

Survey B was sent to diaconal employees, ELCN bishops, The Church Council, members of the former diaconal definition committee, and lecturers at the diaconal master programs. Diaconal employees were included as representatives of the diaconal ministry, and the Church Council as representatives of the ELCN's highest decision-making power (outside the General Synod). Bishops were included as representatives of the church's political voice, since they are the Church's public face, engaging in political debates in the media on a regular basis. The diaconal definition committee was included because they were in charge of developing the new diaconal plan, and lecturers to evaluate their environmental attitudes influence on diakonal education.

Qualitative interviews with study leaders at educational institutions were included to strengthen data on education. Norway has two master programs in diakonia qualifying for work in the ELCN: one at The Norwegian School of Theology (MF), which is in cooperation with Diakonova University College, and another at Diakonhjemmet University College. The MF/Diakonova program has two study leaders: Tron Fagermoen, representing MF, and Tormod Kleiven, representing Diakonova. Kari

Jordheim is study leader at Diakonhjemmet. Interviews included questions about environmental education, attitude, and behavior (Appendix C and D).

2.2 Pilot Study

A pilot study of Survey A was conducted in August-September 2012. Two respondents in each diocese, 22 respondents in all, were asked to participate. Respondents were informed that they were part of a test group to evaluate the survey's design, and encouraged to comment on the questions' clarity, range of multiple choice alternatives, and impartiality (that they did not feel lead to give one answer rather than another due to the questions form). The pilot study had a 32% response rate (7 respondents). In addition to the pilot study, a deacon suggested modifications to language, clarity, and question range. She also tested the finished survey to estimate response time.

Because questions in Survey B were based upon standard methods, a pilot study was not deemed necessary. However, the deacon who suggested modifications to Survey A, also previewed on clarity and tested Survey B.

2.3 Data Collection

Survey A was conducted during September 2012. Participation was voluntary, and no remuneration offered. Respondents had 12 days to answer. Three days before the deadline, a reminder was sent to those who had not responded. Out of 294 distributed questionnaires to deacons and deacon workers, 90 (31%) were returned. Of the 11 forms to deacon advisors, five were returned (46%). With a confidence level of 95% (used in both surveys) the margin of error (MOE)[2] for deacons and deacon workers was +/- 8.6%. Confidence levels were calculated using the following formula: (1.96 * (sqr (0.25 / n of answers)) * sqr ((population – n of answers) / population)) * 100. A separate MOE for deacons and deacon workers could not be calculated, because information on number of deacons versus deacon workers was not available. The MOE for deacon advisors was +/- 32%; too large to calculate statistical difference between deacon advisors and the other diaconal employees. The MOE for gender was +/-11% (27%) for women, and +/-13 (43%) for men[3]. Notice that response rate for

[2] To obtain an acceptable MOE, a larger percentage of response is required for smaller populations compared to larger populations.

[3] Among diaconal employees, 75% are women, and 25% are men (personal communication with J. Klungrehaug, December 11, 2012).

men was relatively higher than that of women, indicating that men may have an higher interest in stewardship. Lack of up-to-date demographic data on population level, made it impossible to calculate MOE for other demographic variables. Data from 2009 data regarding diaconal positions per diocese (Det Norske Diakonforbund, 2009) and personal communication with Jarle Klungrehaug (December 11, 2012) did, however, indicate that the diocese data in this survey was too weak to be used for generalization to population. Diocese data were therefore not analyzed further. Though MOE was not run for age, graduate year, or percentage of position, these data were logically successional, and therefore considered robust when forming patterns.

Survey B was conducted in the beginnings of October 2012. Respondents had 12 days to respond, and a reminder was sent to those who had not responded within the first week[4]. The survey was sent to 340 respondents, of whom 134 responded (39%, MOE +/-6.6%). To increase response, the survey length was decreased to a minimum, and respondents were offered a free lottery ticket. Nine out of eleven deacon advisors (82%, MOE +/-14%), and 106 out of 294 deacons and deacon workers (36%, MOE +/-7.6%) responded to the questionnaire. Among diaconal employees, 34% of the women (MOE +/-8.9%) and 32% of the men (MOE +/-17%) responded. Notice that the MOE for men was slightly low. Like in Survey A, 2009 data on deacons and deacon workers divided in dioceses, indicated that this survey's diocese data were too weak to be generalized to the population (Det Norske Diakonforbund, 2009). Though the percentage of response per diocese may appear acceptable, there are eleven dioceses and consequently few respondents in each diocese group. A considerably large relative response rate per diocese would be needed to obtain acceptable MOEs. Consequently diocese data was either not further analyzed for survey B.

MOE for remaining main groups, e.g. bishops, lecturers etc., were also too low to be included in the study. Notice, however, that the relative response rate in percentage among all groups, except for bishops and educational staff, was high. This indicates that there is little basis to claim that groups with low MOE generally did not answer due to lower environmental interest. Only two of the eleven bishops answered (18.2%, MOE +/-63%). Among former members of the diaconal definition committee four out of nine responded (44%, MOE +/-37%), among members of the Church

[4] Following standard recommendations of online survey publishing (Aksnes Media AS, sine ano), the survey was sent on a Tuesday and a reminder the following Tuesday, because this is known to be the least busy day of the week.

Council six out of 15 (40%, MOE +/-31%), and among the lecturers only seven out of 38 (18%, MOE +/-34%).

Study leaders were interviewed with a voice recorder in October 2012, and comments transcribed to English. I interviewed Fagermoen October 10th, Kleiven October 18th, and Jordheim October 22nd.

2.4 Demographic Characteristics

To measure relationships with demographic variables Survey A addressed gender, age, work location (city, village, countryside), diocese, job title, percentage of position, educational institution (deacons only), graduate year (deacons only), and undergraduate background. Survey B validated the targeting key variables gender, age, job title and diocese. MOE for demographic variables could not be calculated due to lack of information on demographic distribution across the population.

2.5 Reliability Testing

Reliability of the NEP and Schwartz V.S. data was tested running Cronbach's alpha, which measures internal consistency of related questions. The initial NEP reliability test showed a Cronbach's alpha of 0.7069. According to Kent (2001) alphas above 0.7 are acceptable. It was, however, necessary to exclude the NEP 3 and NEP 10 data, because their point-biserial correlation values were below 0.2 (0.16 and 0.05, respectively) (Jackson, Draugalis, Slack, & Zachry, 2002). After excluding these values Cronbach's alpha increased to 0.74. Cronbach's alpha was also run for the Schwartz V.S. dataset. The social altruistic values had an alpha of 0.81, and the biospheric values an alpha of 0.79. The alphas were high, particularly considering that each alpha was calculated on only four items.

2.6 Correlation Analysis

The R statistical software was used for all statistical analysis. Analysis of variance (ANOVA) was used to calculate correlation between NEP and Schwartz V.S. items with all demographic variables, except for gender, where Independent Samples T-test was used. Data in Survey A were more complex, requiring a larger range of statistical analysis, including ANOVA, Independent Samples T-test, Kruskal and Wallis One-Way ANOVA, and Wilcoxon Rank-Sum Test. For details on which test is used where, see results. Standard deviations (SD) were calculated for parametric tests with

more than two alternative answers. Sample sizes were too low to calculate the more sensitive non-parametric tolerance intervals (Bower, sine ano).

3. RESULTS

3.1 The New Environmental Paradigm

Survey B gave an average NEP score of 54.7. Gender was the dominant demographic variable correlated with NEP scores (Table 1), and the only demographic variable explaining value orientation (see Table 1: anti-anthropocentrism). For NEP 4 and 6,

Table 1
Correlations between demographic variables and NEP scores

NEP items	Gender (p-value)	Age (p-value)	Job title (p-value)	Mean
Growth limits				
1. We are approaching the limit of the number of people Earth can support.	**0.008793****	**0.02118***	0.6533	3.17
2. The earth has only limited room and resources.	0.9768	0.1580	0.5766	3.86
3. The earth has plenty of natural resources if we just learn how to develop them.	0.8571	0.4179	0.2135	1.77
Anti-anthropocentrism				
4. Humans have the right to modify the natural environment to suit their needs.	**0.01166***	0.9883	0.896	3.20
5. Humans were meant to rule over the rest of nature.	0.3274	0.1286	0.9613	3.19
6. Plants and animals have as much right as humans to exist.	**0.04427***	0.769	0.5523	3.96
Nature's vulnerability				
7. The balance of nature is strong enough to cope with the impacts of modern industrial nations.	0.056	0.1725	0.293	4.15
8. The balance of nature is very delicate and easily upset.	0.06278	0.7006	0.7314	4.31
9. When humans interfere with nature, it often produces disastrous consequences.	0.06845	0.1616	0.521	3.73
Management and responsibility				
10. Human ingenuity will insure that we do NOT make the earth unlivable.	0.0829	0.8506	**0.04814** *	3.10
11. Despite our special abilities humans are still subject to the laws of nature.	0.2049	0.2433	0.1459	4.49
12. Humans will eventually learn enough about how nature works to be able to control it.	**0.004086****	0.4086	0.8209	3.81
Perception of eco-crisis				
13. Humans are severely abusing the environment.	0.6747	0.914	0.7642	3.9
14. Human destruction of the natural environment has been greatly exaggerated.	0.07774	0.5278	0.4534	4.14
15. If things continue on their present course, we will soon experience a major ecological disaster.	0.3644	0.6683	0.4173	3.96
TOTAL	0.01404*	0.1069	0.3821	54.7

*Note. Significant codes: * = p[5] > 0.05, ** = p > 0.01*

women (M[6] = 3.4, SD = 1.2 and M= 4.1, SD = 1.1 respectively) scored significantly higher than men (M = 2.8, SD = 1.1 and M = 3.6, SD = 1.4, respectively), indicating that women are less anthropocentric than men. Also, women had a significantly higher total NEP score (M = 55.0, SD = 6.4), than men (M = 52.5, SD = 6.2)[7].

[5] P = p-value
[6] M = mean
[7] To ensure data quality (Hawcroft & Milfont, 2010) the NEP scale was not shortened, but space will not be used to go into detail on other than the 'anti-anthropocentric' NEP data relevant for this paper.

3.2 Schwartz Value Scale

Respondents expressed a higher degree of altruistic (M = 24) compared to biospheric (M = 18) values. Mean score values were calculated by adding all the means of the four altruistic and the four biospheric values. Age was the only significantly correlated demographic variable (Table 2). Biospheric value orientation increased with the respondents' higher age (Fig. 2).

Table 2
Correlations between demographic variables and Schwartz values

Schwartz items	Gender (p-value)	Age (p-value)	Job title (p-value)	Mean
Egocentric value orientation				
1. Social power: control over others, dominance	0.6743	0.707	0.2569	2.17
2. Authority: the right to lead and command	0.7539	0.5861	0.1212	2.03
3. Wealth: ability to purchase services and material possessions	0.3437	0.5771	0.3344	2.71
4. Influence: having an impact on people and events	0.7289	0.8394	0.1552	3.33
Social altruistic value orientation				
5. A world of peace: free of war and conflict	0.3789	0.7164	0.4046	5.48
6. Equality: equal rights and opportunities for all	0.7317	0.6335	0.972	6.40
7. Helpfulness: working for others welfare	0.6303	0.7368	0.7501	6.18
8. Social justice: correcting injustice, care for the weak	0.7576	0.767	0.6132	5.84
Biospheric value orientation				
9. Being one with nature	0.4614	0.4051	0.5581	3.47
10. Preventing pollution	0.8932	**0.03452** *	0.08241	4.63
11. Protecting nature and environment, preserving nature	0.9284	**0.03035** *	0.6799	4.97
12. Respecting the earth: living in harmony with nature	0.6421	0.09928	0.7377	5.32

*Note. Significant codes: * = p > 0.05*

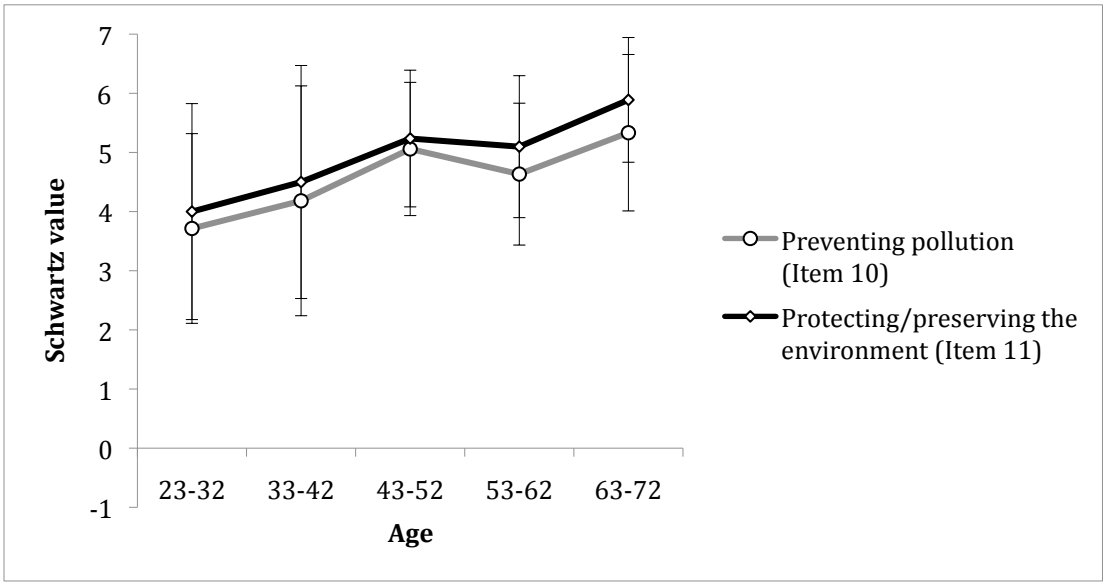

Figure 2. Correlations between age and biospheric value orientation in Schwartz v.s.

3.3 Motivation

Data from Survey A compensated for the lack of local value items in the Schwartz V.S. Respondents were given a list with different possible motivation factors, and

asked which motivated or did not motivate them to protect creation. According to statistician, Lars Kåre Grimsbys[8] (pers. comm. 21.10.2012), recommendations, p-values < 0.2 were acceptable. This is common in social sciences, but p-values > 0.05 are regarded weak evidence and should be used carefully because they occur on avarage occur on average a 20% of the time by chance (Gelman, 2012). P-values < 0.05 are regarded moderate evidence, and p-values < 0.01 strong evidence (Cox & Snell, 1981, cited in Silva, 1999). Social altruistic factors motivated almost all diaconal employees for environmental protection (Table 3). Local factors motivated fewer of them, while biospheric factors were the least motivational when calculating mean values per motivation type.

Table 3
Factors motivating diaconal employees for stewardship with statistical correlations

Motivation factors	**Motivates % of sample**	**Correlative factors**	**P-value**
Local motivation			
1. Reducing operating expenses and resultantly be able to reallocate funds to other diaconal initiatives	59	Work location	0.0407**
2. Protecting outdoor recreational interests	79	- None -	
Social altruistic motivation			
3. Fighting for justice and a fair distribution of goods	98	Gender	0.1590*
4. Contributing to a long term and sustainable use of natural resources ”	97	- None -	
Biospheric motivation			
5. Save endangered species	73	- None -	
6. Care for animal welfare	43	Work location	0.0086***
		Age	0.1838*

*Note. ANOVA was used to calculate correlation with all demographics, except for gender where independent samples T-test was used. Significant codes: * = p > 0.2, ** = p > 0.05, *** = p > 0.01.*

Local Motivation

The local motivation saving money correlated with work locality. Rural people were most motivated to save money (78%), followed by villagers (65%), and ultimately urban folk (48%).

Social Altruistic Motivation

Fighting for a fair distribution of goods motivated men significantly more (100%) than women (97%). Striking, all altruistic and biospheric arguments motivated men

[8] Lars Kåre Grimsby teaches ‘Social Statistics and Methods’ at The Norwegian University of Life Sciences (UMB)

more than women, while the egoistic values motivated women more than men. However, the relationship was only statistically significant for the first.

Biospheric Motivation

Animal welfare motivated 70% of the villagers, 48% of the rural people, and 31% of the urban people. Age was also, to a low degree, related with this motivation factor. There was no obvious pattern, but a large difference between motivation in the age groups 62-72 years (17%) and 23-32 years (80%).

3.4 Theology of Stewardship

Survey A included an open answer question, where respondents were asked which theological arguments they found most relevant in regard to stewardship. Respondents were divided into four categories (Table 4).

Table 4
Theological arguments

Argument		Classification	%
A	Creation is a gift from God to the humans	Altruistic	22
B	God created the world for all human beings, and our management should not exclude people from its benefits	Altruistic	36
C	The Earth is God's	Unknown	15
D	Humans have a responsibility be good stewards, to protect and care for all God's creation	Biospheric	27

Note: N:78

In all, 18% of respondents did not answer this question, but those who responded typically gave biblical references and mentioned one or several arguments. If there were a mix of biospheric and social altruistic arguments respondent were placed in category d, because protection of creation not excludes protection of people. Note that only 27% of the sample mentioned biospheric argumentation.

Theological arguments were sorted from the most anthropocentric to the most biospheric. Further Kruskal-Wallis One-Way ANOVA and Wilcoxon Rank-Sum Test were used to calculate if there were statistical significant correlations with any of the demographic variables. The analysis showed significant correlations with working location (0.05) and age ($p = 0.05$). Rural people scored highest on biospheric argumentation (44%, SD = 1.4), followed by villagers right behind (42%, SD = 1.3) and ultimately urban people (14%, SD = 1.2). Despite large differences between age groups, there were no patterns in the data.

4. DISCUSSION

4.1 NEP and Gender

Women scored higher on the NEP scale than men. Most importantly, women appeared to hold higher biospheric values, which confirm other studies on gender and NEP (Bjerke, et al., 2006; Johnson, Bowker, & Cordell, 2004; Rideout, Hushen, McGinty, Perkins, & Tate, 2005; L. Zelezny, P. P. Chua, & C. Aldrich, 2000). Zelenzny et al. (2000) suggest gender socialization, the way boys and girls are raised differently, to largely explain this trend. Men often score higher on NEP in non-western countries were boys and girls are raised differently, supports this explanation (Mostafa, 2007; Olofsson & Ohman, 2006; Xiao & Hong, 2012). Also genetic differences between males and females should be considered.

Comparison of NEP scores between diaconal employees and the Norwegian population would have been useful, but the only recent NEP data of the Norwegian population (Bjerke, And, & Kleiven, 2006) used a shortened eight-item NEP scale. In theory, these eight items could be compared with the same items from the full scale, but Hawcroft and Milfond (2010) recommended not to compare the standard 15-item version with shortened NEP scales containing less than 10 items, because respondents tend to respond differently when presented to less items.

4.2 Schwartz Value Scale and Age

Results from Schwartz v.s. showed a higher adoption of social altruistic compared to biospheric values. The trend may be explained in at least three ways:

- First, through Lutheran theology: Martin Luther himself believed that God is in and with all living beings, but still Lutheran tradition has often taught the opposite - that God is not found in nature (Samuelsson, 2010). Lutherans have focused away from creation, and towards mankind's power over, and higher value than, nature (Vorster, 2009).
- Second, through diaconal history: Officially, protection of creation has been part of the ELCN's diaconal ministry for only five years. Before 2007 human care was the only diaconal target.
- Third, through education: Most deacons graduated before the new definition of diakonia was established. It may also be an issue that only students with background in nursing, pedagogy and social work are accepted in the diaconal master

programs (Kirkemøtet, 2004). By rejecting students with life science backgrounds, the institutions signal that protection of creation is less important than other diaconal curricula. It also filters more environmentally committed students, mostly found among those with life science background (Abd El-Salam, El-Naggar, & Hussein, 2009; Tikka, Kuitunen, & Tynys, 2000), e.g. biology, ecology, and natural resource management .

As shown previously, the ELCN officially holds a biospheric definition of stewardship (Den Norske Kirke, 2008; Kirkerådet, 2006). Since the ELCN's views conflict with the admission requirements, the study leaders at the diaconal master programs were asked how they defined "protection of creation". Tormod Kleiven, study leader at Diakonova responded: "Protection of creation is protection of those parts of the creation that are *important to humans* [authors emphasize]. That is, the creation is given to us, and has no value if not for our use".

However, Tron Fagermoen, Kleivens co-study-leader at MF, defined protection of creation as the protection of all creation: "I think nature has *intrinsic value* [authors emphasize], that the creation is God's creation, and that it was not only created for humans to extract natural resources." Kari Jordheim, study leader at Diakonhjemmet had a similar view: "Protecting the creation is protecting all that God has created. The creation is God's, and we have a responsibility to manage it to creation's best. Creation has value in itself, *regardless of its value to humans* [authors emphasize]".

If those who define admission requirements think diakonia only relates to humans, it is understandable that life science students are not accepted into the deacon study. Possibly some may be concerned that students with life science background are more biased toward environmental issues, less sensitive to humanitarian issues, or both. Noticeably studies have revealed a positive relationship between having environmental education with ability and willingness to work sustainably with social justice, development aid and charity (Andrzejewski, Baltodano, & Symcox, 2009; Ji, Huang, Liu, Zhu, & Cai, 2012). Apparently neither the ELCN officially nor two of three diaconal study leaders' views on protection of creation, can explain why the admission requirements remain unchanged. The degree to which protection of creation is viewed as important compared to other diakonia may explain this trend. This is further discussed in Paper II.

Back to the Schwartz scale, age was the only demographic explaining the variability in value scores. The biospheric values "preventing pollution" and "protecting and preserving nature and environment" were both significantly correlated with age: the higher age, the higher adoption of the values. These results differ from other studies on biospheric value orientation and age (Bjerke, et al., 2006; R. E. Dunlap, Van Liere, Mertig, & Jones, 2000). The sizes of each age group differed in the survey sample, but the low p-values and clear patterns leave little doubt that the results are trustable. Noticeably the cited studies used generally formulated value items (e.g. animals have the same right to live as humans), and not values formulated as actions like those found in the Schwartz scale (e.g. preventing pollution). The results show that older age groups think nature has a higher intrinsic value when presented to values formulated as actions (Schwartz scale), but there was no correlation with age when presented to generalized values (NEP scale). The opposite pattern was seen when calculating correlation with gender.

4.3 Motivation

To evaluate what motivated diaconal employees to work with environmental initiatives, six different motivation factors were presented: two from each value orientation. Respondents were asked which motivated them, and which did not. This was the only measure including local value orientation (see local motivation).

Local Motivation

The local concern "reduction of operating expenses, and resultantly reallocation of funds to other diaconal initiatives", significantly motivated respondents according to where they worked. Rural people were most motivated to initiate environmentally friendly initiatives to save and reallocate money, followed by villagers and ultimately urban people. Other studies have shown lower NEP score among rural compared to urban citizens (Berenguer, Corraliza, & Martin, 2005; Bjerke, et al., 2006). If rural diaconal employees care less about nature's intrinsic benefits of stewardship, this can explain why they, more than others, view saving money as a more important benefit of stewardship. Another possibility is that rural congregations struggle more with the economy than urban congregations. These possible explanations, however, can neither be confirmed nor rejected from the data, and are beyond the scope of this paper.

Work location was also correlated with being motivated by animal welfare, but the pattern was different. Animal welfare motivated 70% of the villagers, 48% of the rural citizens, and 31% of the urban citizens. This is understandable since urban people are less likely to have contact with animals (wild or companion), than villagers and rural folk. Likewise villagers are those most likely to keep animals as pets, and rural folk to raise production animals. These explanations are supported by a Dutch study that showed pet owners cared most for production animal welfare, followed by farmers, and ultimately non-animal owners (Boogaard, Oosting, & Bock, 2006).

Social Altruistic Motivation

Both social altruistic factors motivated most of the sample. "Fighting for global justice and a fair distribution of goods" motivated men significantly more than it motivated women. If statistical significance was not taken into account social altruistic and biospheric values motivated men more than women in all cases, while the egoistic values motivated women more than men. Since only one of the motivation factors was significantly related to gender, these data cannot be given much weight. Still the results are surprising, considering that women had significantly higher NEP scores. The results indicating that women have a higher biospheric value orientation than men correspond with other studies (Bjerke, et al., 2006; Olofsson & Ohman, 2006; L. C. Zelezny, P.-P. Chua, & C. Aldrich, 2000). Nevertheless, men appear more motivated to work actively with environmental challenges, even when it does not affect them directly. Searching for a possible explanation to this trend, the relationship between gender and job title in the data was investigated. Results showed that 79% of the men and 74% of the women were deacons. In all, 33% of the men and 21% of the women had master degrees in either diakonia or theology. In other words, men were more educated than women, which may contribute to explain men's higher adoption of social altruistic values.

Biospheric Motivation

Animal welfare motivated younger respondents significantly more than the older. Other studies also show that young people care more about animal welfare than older people (Cowtan, 2006). Focus on animal welfare has increased considerably the past 50 years, with the increased industrialization of agriculture and new knowledge about animal feeling, intelligence and behavior. Younger people usually adapt faster to new

issues and knowledge than older people, which may explain why younger people care more for animal welfare (Pickett-Baker & Ozaki, 2008).

4.4. Theology of Stewardship

When asked about theological arguments to explain or defend protection of creation as part of diakonia, a majority (58 %) of the sample gave purely anthropocentric biblical or faith-based references, 27% gave biospheric theological arguments, and 15% gave references that did not relate to value orientation. This accords with Hope (2012), showing that Christians more often focus on Christological rather than creational theology related to environmentalism. In other words, Christians are more probable to use arguments like "loving your neighbor" compared to "biospheric stewardship" as theological arguments to explain pro-environmental attitudes. Other studies have shown that Christian belief is negatively correlated with biospheric value orientation (Malka, Soto, Cohen, & Miller, 2011; Sarigöllü, 2009). These authors claim that the theological doctrine that human dominates over nature is likely explaning why Christians tend to be anthropocentrically oriented, but the doctrine has impact beyond believers. Today this doctrine has largely impacted the western world (Deng, Walker, & Swinnerton, 2006). Different from Eastern and Native American cultures, where most people express higher NEP scores and more often have biospheric value orientations (Deng, et al., 2006), westerners more often exhibit egocentric or altruistic value orientations (Johnson, et al., 2004; Schultz, Zelezny, & Dalrymple, 2000).

Those aged 53-67 years were least likely to argue biospherically. However, there was not a linear tendency towards a arguing biospherically the younger the respondent. Since respondents were asked to list "the most important" and not "all relevant" theological arguments, the restricted question might explain the inconsistent pattern. Also notice that a better correlation analysis for these data would be the Multinominal logit model, but that multilogit p-values could not be obtained in the statistical software available.

4.5 Discussion of methodology and recommendations

NEP analysis has become the most widely used measure of environmental concern in almost 30 years (Riley E. Dunlap, 2008). Nevertheless, the method has some weaknesses. One pitfall is regarding high NEP scores as equal to pro-

environmentalism or ecological knowledge. Item 3, "The earth has plenty of natural resources if we just learn how to develop them", is one item which may relate to pro-environmentalism or ecological knowledge, but which not necessarily does.

Another NEP weakness is that some statements, particularly statement one, two and three on growth limits, are unclear, misleading or both. The same person may e.g. interpret statement one; "we are approaching the limit of the number of people the earth can support", as either yes (because we overuse the Earth's resources) or no (because in theory we could change to a more sustainable way of living). Though not all NEP weaknesses can be avoided, recommendations from Hawcroft and Milfont (2010), who studied use and abuse of the NEP scale in 69 scientific studies, were used to maximize quality output.

Schwartz v.s. is also a much used and recognized method (Hedlund, Marell, & Gärling, 2012; Henry & Dietz, 2012; Wang & Juslin, 2011). Its major limitation in this study was that it did not include items to measure local values, e.g. local recreational interest, saving money, or street littering. In hindsight, I would recommend others who study value orientation of people representing an organization to introduce four local values to the Schwartz scale. To compensate for the lack of this, value-oriented data from Survey A was used. Though this survey A questions was not designed for this paper, it provided useful data to describe the local values economy and outdoor recreational interests. It also contributed with data concerning social altruistic and biospheric value orientation. For a more robust result it is recommended to include more factors within each value group, and consider using Cronbach's alpha for reliability testing.

Another weakness of this study is that the survey A motivation questions only had two response alternatives; *motivates* and *does not motivate*. An improvement would be using a 5-point Likert scale where possible, because polarized alternatives do not reveal the complexity of the issues.

5. CONCLUSION

This study suggests that diaconal employees have a more anthropocentric value orientation than ELCN policies. Although most employees appear motivated to

protect creation, their value orientation concerns human welfare rather than biospheric stewardship, and few recognize nature's intrinsic value. If diaconal employees set the agenda for the diaconal ministry, initiatives to protect creation for creations own sake are most likely not initiated. However, some anthropocentric initiatives, such as protecting outdoor recreation opportunities, can promote animal welfare and protect threatened species.

Gender is the main demographic factor correlated with value orientation. Women have significantly higher biospheric values than men. But, when values are formulated as actions, the biospheric values correlates positively only with older aged employees. Surprisingly, motivational factors reverse this trend: biospheric factors motivate younger more than older employees, and men more than women.

This study demonstrates that value-oriented studies can lead to decisive conclusions, and be occasionally misleading due to the structure of standardized tests. To better evaluate relationships between values and demographics, further studies should investigate correlations between general value topics with action-oriented behavior. Keep in mind, however, correlation is not the same as causation. Complementary research on the relationship between the Church's attitudes and environmental behavior is also recommended.

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Why Diaconal Employees Are Not Motivated to Walk the Talk of Stewardship

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Abstract: In 2007, the Evangelical Lutheran Church of Norway (ELCN) officially changed from a social altruistic to a biospheric value orientation, when including environmental protection as part of its diaconal ministry. Despite ELCN's official change, results from Paper I suggest that diaconal employees still maintain altruistic value orientation. To explain why diaconal employees have not adapted ELCN's biospheric value orientation, a combined quantitative and qualitative approach was used. Two online surveys were sent to all ELCN diaconal employees. In addition, study leaders at the master programs in diakonia were interviewed. Data were gathered on diaconal employees' knowledge, attitude, and practice correlated with environmental protection and stewardship. Gender and education were the core variables explaining environmental attitude and value orientation. Pro-environmental affective attitude was positively correlated with men and higher education. Pro-environmental cognitive attitude was positively correlated with men, higher education, and older age. Pro-environmental conative attitude and behavior correlated positively with men, higher education, young age, and working in urban or semi-urban areas.

Key words: Attitude, behavior, diakonia, ELCN, environment, value orientation

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1. INTRODUCTION

Research suggest that Christians have a lower biospheric value orientation compared to the general population (Cowtan, 2006; Malka, Soto, Cohen, & Miller, 2011; Sarigöllü, 2009). The Evangelical Lutheran Church of Norway (ELCN) has acknowledged its neglect of stewardship, and taken steps to include eco-theology in its diaconal ministry. Eco-theology relates to religious teachings about creation and humans responsibility to protect it (e.g. Gen. 2:15). The ELCN is one of many churches that, during the last 50 years (Henderson, 2011; McKeown, 2007; Wilkinson, 2010), has evolved from a social altruistic to a biospheric value orientation. Consequently a major part of the scientific community has transformed its perception of Christian ethics and tradition as a cause of ecological problems to seeing it as a partial solution (Pepper, Jackson, & Uzzell, 2010; Van Dyke, 2006).

Despite ELCN's efforts to change, Paper I suggests that most diaconal employees have not adopted the biospheric value orientation. If diaconal employees' values impact diakonia to the degree that protection of creation is not included in the diaconal ministry, ELCN could be associated with *greenwashing*. Greenwashing is falsely claiming to hold environmental friendly practices (Honey, 2008). Most studies concerning church and stewardship have focused on the relationship between theology and political engagement (Ignatow, 2006; Pepper, et al., 2010; Van Dyke, 2006); few have studied the relationship between theology and policy with practice.

If religion is to be a practical solution to the global environmental promlems, practical change must supplement theological change. To explain why most deaconal employees keep to the anthropocentric social altruistic value orientation, it is vital to understand the relationship between diaconal employees environmental attitudes and practice with demographic variables.

This study suggests that education and gender partially explain diaconal employees' social altruistic value orientation. It further proposes changes in the diaconal education system to be a major part of the solution to create a more pro-environmental diakonia.

2. METHODS

This study was based upon Survey A and interviews with study leaders at diaconal master programs. For a description of methodology, see Paper I, page 7-12.

3. RESULTS

This study focuses on attitude as a framework to explain diaconal employees lack of adoption to biospheric value orientation. A persons attitude can be divided in four components: evaluation, affection, cognition, and conation (Maio, Esses, & Bell, 2000). Evaluative attitude refers to peoples general opinion of something: if it is good or bad, right or wrong (Giner-Sorolla, 2004). Affective attitude deals with emotions, while cognitive attitude refers to conscious opinion (Maio, et al., 2000). Exemplified, one may cognitively think that protection of creation is diakonia, but affectionately feel like it is not. Conative attitude deals with disposition for action based on the other attitudes (Maio, et al., 2000). This study also evaluated actual behavior.

3.1 Evaluative attitude

To measure evaluative attitude, respondents were asked to what degree they agreed that the ELCN did right in including protection of creation in diakonia. On a Likert scale from one to five, where one equaled *very wrong* and five equaled *very right*, the average respondent scored 3.5 (SD = 1.6). Two out of five diaconal employees thought it was wrong to include protection of creation in diakonia.

3.2 Affective and cognitive attitude

Since attitude depends upon both affection and cognition, respondents were asked how they *felt* (affective) and *thought* (cognitive) about the importance of eco-diakonia[9] relative to other diakonia. When asked about *thought*- respondents gave higher scores than when asked about *felt* perceptions, 87% and 62% respectively.

Both emotional and cognitive views significantly correlated with age (Kruskal and Wallis, $p = 0.02$ and $p = 0.11$, respectively). There were no outstanding patterns, but a weak tendency to higher importance scores in older age groups for *thought* understanding.

[9] Eco-diakonia is diakonia related to environmental protection (protecting creation)

To validate the abstract notion above, employees were asked to respond to statements on concrete environmental issues (Table 1). Statements a and d significantly correlated with gender (Wilcoxon Rank-Sum Test, $p = 0.03$ and $p = 0.18$, respectively). None of the men agreed that eco-diakonia was too expensive, while 10 % of the women did. Also twice as many women were unsure as men, 25% and 12 %, respectively. Correlation between statement d and gender was weaker, but showed that more men (91%) than women (81%) believed global climate change was man-made. None of the men disagreed to the statement, while 5% of the women did.

Table 1
Respondents' attitudes and opinions on environmental issues

Statements	**Percentage (%) of total sample**		
	Agree	Disagree	Unsure
a) Eco-diakonia is too expensive	6.3	75	19
b) Eco-diakonia takes too many resources from other diaconal tasks	20	62	18
c) Initiatives to ensure environmental protection have no real effect	1.1	75	4.2
d) Global climate change is man-made	84	3.2	13
e) When buying food to use in church context, I think it is right to prioritize organic products though these are more expensive than other products	55	12	34
f) Initiatives to reduce climate gas emissions have no real effect	3.2	82	15

Statements a and b significantly correlated with job title (Kruskal and Wallis, $p = 0.07$, and $p = 0.07$, respectively). Only 18% of the deacons either agreed or were unsure whether eco-diakonia was too expensive, while 48% of the deacon workers responded equally. Further, 65% of the deacons agreed that climate change is man-made, while only 43% of the deacon workers agreed, suggesting that education positively correlates both with pro-environmental attitude, and with faith in science.

Through another set of statements, respondent were asked how they thought the ELCN should work with environmental issues (Table 2). Statements were presented with a 3-point Likert scale, consisting of *agree*, *unsure*, and *disagree*. Generally speaking, men agreed more than women that the church should engage in environmental activities.

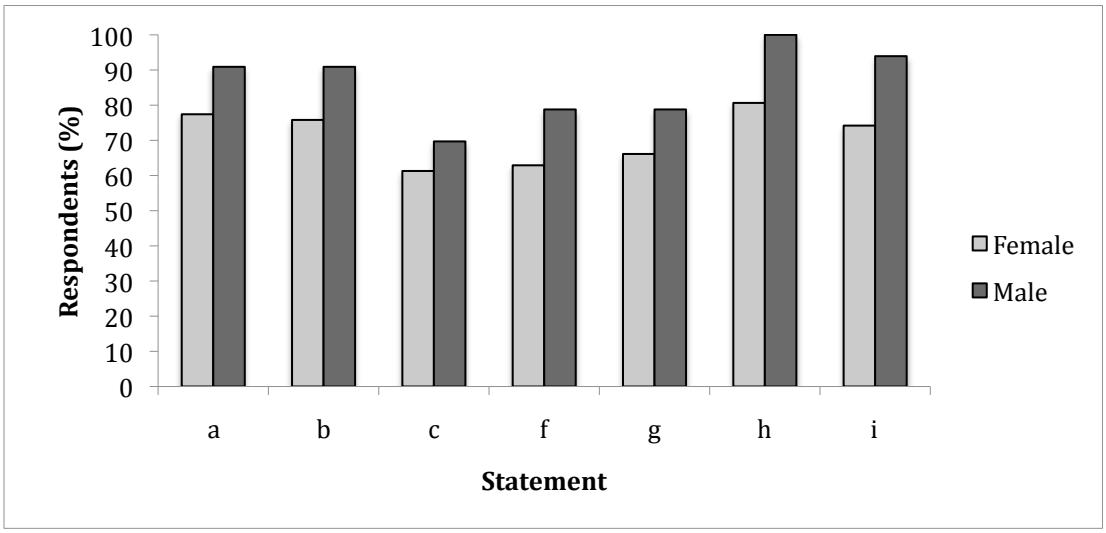

Figure 2. *Percentage of men versus women who thought the Church should engage in environmental debate and practice*

Table 2

Demographic differences regarding environmental practices in the ELCN

Statements	**Descriptive factors**	**P-value**
a) The church should spread information about global environmental issues through its services	Gender	0.11 *
	Working percentage	0.004***
	Job title	0.0002****
	Graduation year	0.003***
b) The church should spread information about local environmental issues through its services and meetings	Gender	0.08*
	Working percentage	0.003***
	Job title	0.02**
c) The church should spread information about global environmental issues through the media	Job title	0.03**
d) The church should spread information about local environmental issues through the media	Working percentage	0.012**
	Job title	0.04**
	Graduation year	0.08*
e) The church should engage in environmental research	- none -	
f) The church should engage politically about global environmental issues	Gender	0.08*
	Job title	0.12*
g) The church should engage politically about local environmental issues	Gender	0.16*
	Working percentage	0.12*
h) The church should have a practical diaconal engagement regarding local environmental issues	Gender	0.007***
	Working percentage	0.003***
i) The church should have a practical diaconal engagement regarding global environmental issues	Gender	0.02**
	Working percentage	0.013**
	Job title	0.09*

Note: All statistics are calculated with Kruskal and Wallis one-way ANOVA, except gender statistics that are calculated with the Wilcoxon Rank-Sum test. The table only shows descriptive factors with statistically significant p-values of 0,2 and below. Significant codes: *= p > 0.2, ** = p > 0.05, *** = p > 0.01, **** = p > 0.001

Higher education (see job title) was also largely correlated with supporting pro-environmental action (Fig 3). Working percentage and graduation year, significantly correlated with some variables, but there were no patterns in the data.

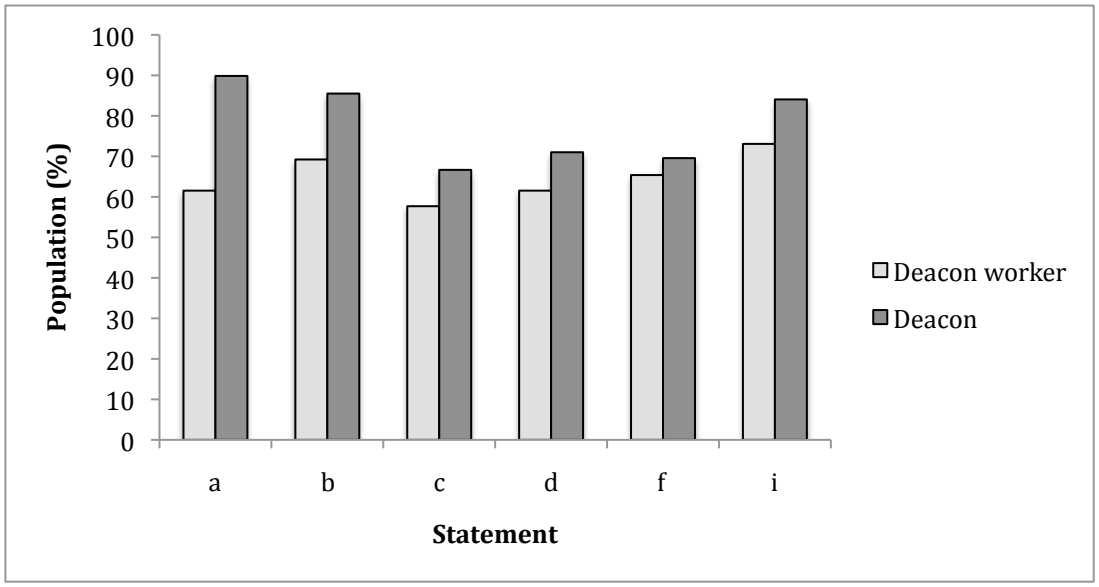

Figure 3. Percentage of deacons versus deacon workers who thought the Church should engage more in environmental debate and practice.

Respondents were further asked to what degree, on a Likert-scale from one (very negatively) to five (very positively), other church employees and ecclesiastical actors within the ministry had received stewardship initiatives. According to the diaconal employees, the diaconal boards were the most positive to stewardship (M = 3.9), followed by partners outside the Church (M = 3.7), priests (M = 3.5), congregational boards (M = 3.5), other Church employees (M = 3.4), and Church members in general (M = 3.3). Deacons were consistently more negative to others' attitude compared to deacon workers (T-test, p = 0.11). There was also a patter that men consistently were more negative to others' attitudes compared to women, but this relationship was not significant.

3.3 Conative attitude

To evaluate respondents' knowledge about protection of creation and management of natural resources, questions assessed educational background, and participation in relevant courses and seminars. The interviews with the study leaders contributed to understanding modern diaconal education.

The results showed that 31% of the respondents had taken courses or seminars concerning eco-diakonia or environmental protection in general. More than twice as many men (55%) than women (21%) had participated in environmental courses/ seminars (T-test, p = 0.003). Work location also significantly influenced participation

(ANOVA, p = 0.009). In total 55 % of the villagers, 31% of urban people and 17 % of rural folk had taken courses/seminars. There were further a significant correlation (ANOVA, p = 0.03) between job title and participation in courses/seminars. In total 35 % of the deacons (SD = 0.5) and 19% of the deacon workers had participated in courses/seminars. Age was weakly, but significantly, correlated with participation in courses/seminars (Fig 4) (ANOVA, p = 0.11). There was a positive trend of more participation in courses/seminars with younger age.

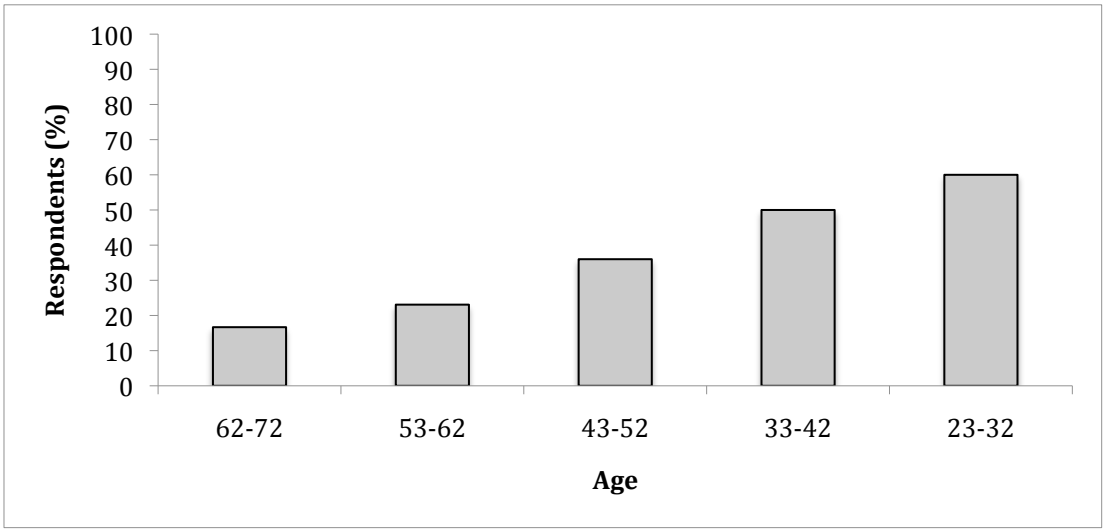

Figure 4. *Correlations between age and participation in courses or seminars concerning eco-diakonia or environmental protection in general*

When going from searching to applying knowledge, 70 % of the deacons and deacon workers responded that they had included eco-diaconal initiatives in their ministries. However, 41% of these only reported awareness raising initiatives such as writing about it or celebrating open-air services. One deacon commented: "In diakonia we usually say that it is easier to preach the gospel through actions than through words. It appears, for stewardship, it is often the opposite."

There was a significant relation between gender and practical engagement (t-test, p = 0.04). While 84% of the men had worked with eco-diakonia, only 62% of the women had done the same. As an additional measure of applied protection of creation in the local diaconal ministries, the current list of Eco-certificated congregations was analyzed (Grønnkirke, 2012). In total, 35% of the deacons belonged to one or several congregations or a parish that were either Environmental Lighthouses or Green Congregations. Using t-test and ANOVA no statistical correlations between belonging

to a certificated congregation or parish and either of the demographic variables were observed.

As a measurement of private environmental engagement, respondents were asked about membership in environmental organizations. There was a significant correlation with gender (T-test, $p = 0.19$) and working location (ANOVA, $p = 0.16$). Almost three times as many men (21%) as women (8%) were members in environmental organizations. Among locations 21% of urban people, 15 % of villagers and 9% of rural folk held membership in an environmental organization.

4. DISCUSSION

4.1 Evaluative attitude

Fifty-seven percent of the sample supported protection of creation in diakonia. Traditionally, academics and higher educated people within the church have been the first to grasp environmental concerns, but today stewardship is grasped at all levels of the Church (Botvar, 2012; Kirkerådet, 2007). During the interview, study leader at Diakonhjemmet, K. Jordheim, confirmed that protection of creation had been discussed and viewed as an important issue within academia long before it was included in ELCN's definition of diakonia: "The new definition allowed us to go from discussing the issue with the students to bringing it into the official academic curriculum." Deacons who graduated after 2007 were most positive to stewardship, indicating that the increased focus on this issue in ELCN and academia has given results. The positive attitude was also high among those who graduated between 1973 and 1982. This pattern was more difficult to explain. It may be due to a cohort effect (Franzen & Meyer, 2010), but sample sizes for some of the age groups were too small for reliable conclusions.

Table 1, regarding respondents attitudes and opinion on environmental issues, partially explains why some deacons disagree that protection of creation should be part of diakonia. It may also be related to lack of belief in nature's intrinsic value, or a traditionally inherited sensation that diakonia is reserved for humans. T. Kleiven, study leader at Diakonova, is one of few academics who has had problems accepting *protection of creation* as part of diakonia. He believes that diakonia relates only to humans, but accepts stewardship as part of diakonia, without accepting creations

intrinsic value. In the interview Kleiven said: "Protection of creation is protection of those parts of the creation that are important to humans. That is, the creation is given to us, and has no value if not for our use."

ELCN does not support Kleiven's opinion. The Church Council has explicitly stated that all creation belongs to God; therefore stewardship should not only be for humans' sake, but because creation has intrinsic value (Kirkerådet, 2006). This is confirmed in ELCN's plan for diakonia (Den Norske Kirke, 2008).

4.2 Affective and cognitive attitude

Respondents' cognitive attitude towards the importance of stewardship was significantly higher than affective attitude. This may indicate that most diaconal employees have a fairly good theological understanding of these issues, but that changing their affective perception of diakonia takes time. This is not surprising, since most deacons today graduated before stewardship was regarded diakonia, and because a large part of the diaconal employees are deacon workers without official diaconal competence. Because of this, and because other studies have found age to be negatively correlated with pro-environmental attitude (Bjerke, And, & Kleiven, 2006; Casey & Scott, 2006; Franzen & Meyer, 2010), it was slightly surprising that higher age was correlated with positive affective and cognitive attitude towards the importance of stewardship. However, the results confirmed findings from the Schwarts biospheric value data in Paper I.

Results from this paper also confirm and strengthen Paper I findings that men, despite scoring lower on the NEP scale, reported higher willingness both to act pro-environmentally and to pay for the costs. There also appears a weak, but consistent pattern that men, and those with higher education, regard other groups' attitude towards protection of creation as lower than women and those with less education. It seemed that the more willing one acted pro-environmentally, the more resistant one became towards others' attitude regarding environmental initiatives. This is not surprising, since resistance towards something is less likely as long as that something is not raised as an issue.

It is important to understand that the inclusion of stewardship means a significant change in diakonia from earlier times. Since diakonia was instituted in the last part of

the 1800s until today, it has been a profession primarily for women (Sjursen, 2010), and the first deacons worked as nurses. Later the state took over the health care services, and the Church found new tasks for its deacons, like pastoral care and community work for elders. Though different from nursing, these tasks were of a character making the diaconal ministry little attractive for men.

When protection of creation and fighting for justice were included in diakonia, some might have assumed these initiatives would attract males to study diakonia. These new areas open for the use of more *action*, but ELCN and the educational institutions have not adapted the admission requirements to suit today's diakonia. To be accepted at the deacon study, it is still required to have a bachelor degree in nursing, pedagogic or social work (Kirkemøtet, 2004). These are studies appealing more to women than to men. Consequently, men are indirectly discouraged from a diaconal master degree, although they might have bachelor degrees at least as relevant as those required.

Fagermoen, study leader at MF, explained why MF/Diakonova had not adapted the admission requirements to fit the new definition of diakonia: "If you start by analyzing the definition of diakonia and then expect to find the same kind of people in a diaconal education you lack knowledge of history, how the diaconal science developed, and what diakonia is." Apparently, Fagermoen did not think that the admission requirements should reflect today's diakonia. However, not directing the diaconal education towards what diakonia is today will generate deacon graduates without the sufficient knowledge of their actual working tasks. The admission requirements communicate that the ELCN and the educational institutions are more eager to have deacons with background knowledge in health work and education, than deacons with knowledge about environmental protection. This is despite that neither nursing, nor education, is a primary task for ELCN's deacons today. The state deals with nursing, and the catechists deal with church education. Deacons have tasks like pastoral care, community building, and environmental stewardship; they visit prisoners, or work with drug addicts. This span of tasks is not reflected in the requirements to be accepted into the diaconal study programs.

Another of Fagermoen's comments may explain his opinion: "It would really make me sad, and lead to fatal consequences, if protection of creation is seen as a task for the deacons." It appears Fagermoen disagrees that protection of creation should be a

task for the diaconal employees, but the ELCN's does. According to ELCN's General Synod:

> The plan [for diakonia] is relevant for the entire diaconal field, but its main targets are the local congregations. The plan is normative for local plans, as these should reflect the four main diaconal areas that the national plan mentions (Kirkemøtet, 2007: 1)[10].

The conflict between Fagermoen's view of diakonia and ELCN's official view suggests that MF/Diakonova weighs ELCN's policy only to a limited degree. If the study leaders' personal opinions reflect the study to the degree that students are not taught about ELCN's own policies of eco-diakonal implementation, it may impact students view of diakonia to the degree that they later do not prioritize to include stewardship in their jobs. Kleiven confirms that this is an issue:

> We never really wanted to work with protection of creation. I think that if the congregations shall ever take protection of creation seriously it depends on us taking a large revision of the program. The study program is characterized by those issues that we [Trond and I] find important.

Kleiven was confronted with the fact that most students, while having good knowledge about human care, lack experience with environmental protection from former studies. As part of the interview Kleiven was asked if the diaconal study should compensate for this.

When there are basic parts of the diaconal ministry that the students have not learned about in their bachelors it must be compensated. However, we must ask our self what basic diaconal knowledge is. Protection of creation is not basic knowledge, Kleiven responded.

Again, ELCN's General Synod does not support his opinion, stating that protection of creation is one of four main diaconal areas (Kirkemøtet, 2007).

[10] Authors translation

Diakonhjemmet did not appear to face similar confrontations with ELCN's official guidelines. While reporting some smaller challenges with the implementation of eco-diakonia in the deacon study, Jordheim also informed that she and her staff had viewed biospheric stewardship as important before it became part of the diaconal definition. According to Jordheim, Diakonhjemmet tries to fit in protection of creation in all courses possible. The program staff and students have also repeatedly pushed Diakonhjemmet to adapt more environmental friendly practices.

4.3 Conative attitude

Returning to the Survey A results, more than twice as many men compared to women had taken courses related to stewardship and environmental protection. Participation also depended upon job title. A significantly larger percentage of the deacons compared to the deacon workers, had participated in courses or seminars. This may indicate that education increase probability of acquiring new knowledge. It could also be a direct response to the decreased environmental interest among the less educated (Casey & Scott, 2006; Olofsson & Ohman, 2006).

Though students with environmental study backgrounds are more pro-environmental than others (Abd El-Salam, El-Naggar, & Hussein, 2009; Tikka, Kuitunen, & Tynys, 2000), the positive impact of education in general is crucial, because interviews with the study leaders indicated that the study programs in diakonia add little to student's environmental knowledge. Fagermoen and Jordheim expressed pro-environmental attitudes at different levels, though admitting that protection of creation was less focused than any of the other diaconal areas. Kleiven, on the contrary explicitly stated that he thought biospheric stewardship was unimportant and not part of diakonia. Kleiven also intended to invalidate ELCN's definition of diakonia by saying that it was the result of a few individual peoples views, not reflected among Church members as such. As the results from this thesis show, Kleiven is not the only deacon with negative attitudes towards biospheric stewardship. It is, however, incorrect that his attitudes find much resonance among ELCN members as such. Referring to their final hearing regarding the new definition of diakonia, The Church Council stated: "Protection of creation was received very positively. Since there were some skepticism regarding this during the last hearing, it appears obvious that a change in

attitude has risen during the last year[11](Kirkemøtet, 2007, p. 4)". The Church Council also stated:

> The most important objection revealed in the hearing related to the first sentence. "Humanitarian care" was understood so that "care for creation" was anthropocentrically reasoned. One chose to take cognizance of this rejection, […] and replaced the formulation with 'diakonia is the caring ministry of the Church', as this formulation embraces humans and all creation[12] (Kirkemøtet, 2007, p. 5)[13].

The Church Council's hearing report shows how biospheric stewardship has support in the wide Church. In accordance with ELCN policy (Kirkemøtet, 2007), Fagermoen and Jordheim claimed that biospheric stewardship is equally important to other diaconal areas. However, the low focus on environment in diaconal education, and the limits of the admission requirements, indirectly communicates the opposite.

Returning to participation in courses/seminars, younger diaconal employees tended to participate in more courses than the older aged, possibly because younger people are more open to new knowledge than older people and adapt easier to change (Pickett-Baker & Ozaki, 2008). Further, participation in courses was highest among urban people, followed by villagers, and ultimately by rural folk. Easier access to courses in urbanized areas may explain this trend. Theoretically there could have been a relationship between education and age with where the respondents lived, and consequently the access of courses. This study assumed that a possible explention could be that deacon workers would have the least popular jobs located in the countryside, and that also elder people would be more probable to settle in the countryside. To test this ANOVA analyzes were run, but no significant correlations were detected.

Work location was also significantly correlated with personal environmental engagement. Respondents were asked about membership in environmental organizations, which resulted most common among urban people, followed by

[11] Authors translation
[12] "Diakonia is the caring ministry of the church. It is the gospel in action, expressed through loving our neighbor, creating inclusive communities, protecting creation, and fighting for justice" (Den Norske Kirke, 2008, p. 7).
[13] Authors translation

villagers, and ultimately rural people. Urban people usually adapt new trends first. There are also more local subgroups of organizations in urbanized areas. That fewer rural people have participated in courses/seminars related to eco-diakonia or environmental protection, may explain a lower eco-diakonal focus in rural areas.

Also gender was correlated with membership in environmental organizations. More than twice as many men compared to women were members in environmental organizations. Also about 20 % more men than women reported formerly or presently to have worked actively with eco-diaconal initiatives as part of their diaconal ministry. These results confirm the general trend throughout this study, that men have a more pro-environmental attitude, more environmental knowledge, and are more practically engaged in stewardship both private and at work.

There were no apparent correlation between congregations Eco-certification and the diaconal employees demographics. The larger effort needed to comply with a certification may explain the lack of correlation. Obtaining an Eco-certification depend more on the congregation, or parish's willingness to act pro-environmental, than the individual diaconal employees'.

For evaluation of Survey A methodology, se Appendix E.

5. CONCLUSION

This study suggests that education and gender are the core factors explaining why a majority of diaconal employees view diakonia altruistically rather than biospherically. Results show that male diaconal employees have a higher tendency to act pro-environmentally, but males are indirectly limited from applying to the diaconal programs because the educational institutions require students to have a bachelor in nursing, pedagogy or social work, that are traditionally female dominated studies. These requirements do not reflect the complexity of modern diakonia. If male students comply with the admission requirements, increased admission remains questionable for at least two reasons: First, the diakonia profession might still remain traditionally reserved for females, which also indicates lower salaries than male dominated professions (J. Klungrehaug, personal communication, December 11, 2012). Second, the educational programs in diakonia, and particularly the

MF/Diakonova program, to a very low degree have adapted to the new plan and definition of diakonia. Additionally, admission requirements limit students with higher environmental education from becoming deacons.

As a consequence of these factors, most deacons lack knowledge of environmental care. This study suggests that education in general promotes pro-environmental value orientation and attitudes, but that environmental education adds significantly to this effect. Most of the deacons in this study graduated before *protection of creation* was included in ELCN's diakonia, but even after the topic was included in Church policy, it remains a low priority in the study programs.

Despite this, ELCN's inclusions of biospheric stewardship in diakonia, and the increasing environmental voices within the Church, indicate promise. The interview with Jordheim at Diakonhjemmet shows forces working for change within the educational institutions. Nonetheless, developing a comprehensive pro-environmental diakonia depends on two requirements: first, on the ELCN and the educational institutions to renew admission requirements according to the present definition of and plan for diakonia; and second, on including best-practice management for environmental protection and eco-diakonia as a larger part of the curriculum.

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APPENDICES[14]

Appendix A: Survey A

ECO-DIAKONIA:
Survey to evaluate ELCN deacons attitute towards eco-diakonia

This survey aims at studying **deacons' attitudes to eco-diakonia**. It forms part of a master thesis study to evaluate ELCN's ecotheology, and the effect of 5 years with *protection of the creation* as part of ELCN's official plan for diakonia.

I would truly appreciate if you would take the time to answer the questions, and let your voice be heard to ensure the best research material possible.

The survey consists of 21 main questions, but certain multiple choice alternatives will make additional questions pop up. The survey is estimated to take between 10-15 minutes. It is possible to participate in the survey until September 21, 2012.

The following **definitions** are useful to answer the questions:

According to ELCN's Plan for Diakonia (2007) PROTECTION OF THE CREATION concerns "everything that God has created; the earth with its plants, animals and human beings, the oceans and the air and the entire ecological system. ECO-DIAKONIA are all diaconal initiatives related to "protection of the creation".

The survey also includes questions were you are asked about what you think or feel. Please answer these questions based on your own feeling/thought, and not on the above definitions. Notice that **think/mean** refers to what you think is well justified theologically or through other reasoning, while **feel** refers to what you feel is right independent on reasoning for or against.


Norsk (Bokmål)


English (US)

Would you like to receive a copy of the thesis with the study results?

Yes ☐ No ☐

1) Sex

Male ☐ Female ☐

2) Birth year

☐

[14] The surveys and interviews found in the appendices were originally performed in Norwegian.

3) Diocese

- ☐ Oslo
- ☐ Borg
- ☐ Hamar
- ☐ Tunsberg
- ☐ Agder og Telemark
- ☐ Stavanger
- ☐ Bjørgvin
- ☐ Møre
- ☐ Nidaros
- ☐ Sør-Hålogaland
- ☐ Nord-Hålogaland

If more than one alternative seems right, chose the description of the area(s) where you work the most.

4a) Working area description

City ☐ Village ☐ Countryside ☐

4b) How large is your position (%)?

[ ]

5a) I'm employed as:

Deacon ☐ Deacon worker ☐ Diaconal advisor ☐ Other (please specify

[ ]

5b) I graduated as deacon in:

Year [ ] I'm not a deacon ☐

5c) I did my deacon studies at:

- ☐ Diakonhjemmet University College
- ☐ Diakonova (formerly Menighetssøsterhjemmet)
- ☐ The Norwegian School of Theology/Diakonova
- ☐ Kirkelig Utdanningssenter i Nord (University of Tromsø)
- ☐ Lovisenberg University College
- ☐ I'm not a deacon
- ☐ Other (please specify)

[ ]

5d) To what degree do you think that the deacon studies contributed to your knowledge about ECO-diakonia? (1=not at all, 5=considerably)

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ I'm not a deacon ☐

5e) Which eco-diaconal topics were taught during your deacon study?

---

6) Bachelor degree/pre diaconal education (in the open space you may add any other bachelor degree, but also other additional education you have taken)

- Nursing
- Pedagogies
- Social work
- Child welfare studies
- Other (please specify)

---

7) How important do you FEEL that "protecting the creation" is compared with other diakonia (loving your neighbor, creating inclusive communities, and fighting for justice)?

More important Equally important Less important

Unimportant, I do not feel that "protection of the creation" is diakonia

---

7b) How important do you THINK that "protecting the creation" is compared with other diakonia (loving your neighbor, creating inclusive communities, and struggling for justice)?

Less important Equally important More important

Unimportant, I do not THINK that "protection of the creation" is diakonia

---

8) How much freedom do you feel that you have as to prioritizing what you want to work with/resource use?

- 1 (no freedom)
- 2 (little freedom)
- 3 (some freedom)
- 4 (large freedom)
- 5 (total freedom)

9) The list below includes the four main groups of diaconal initiatives. You are given 100 points, representing 100 percent of your workload as deacon. Give each group points according to how you would like to use your time, but make sure to give exactly 100 points in total.

I have given a few examples of what each group may include, but do not let the examples stop you from including other diaconal tasks). I also want to point out that the areas may overlap, but that this will be considered in the thesis.

A) "Loving you neighbor" (e.g. visiting people in their homes, grief groups, counseling/pastoral care etc.)

B) "Creating inclusive communities" (e.g. gatherings for different groups like youth, elders or families, choir, diaconal church service participation, facilitation for and work with disabled etc.)

C) “Protection of creation” (e.g. reuse, environmental protection, animal welfare, electricity saving, eco-political engagement etc.)

D) “Fighting for justice” (e.g. gather money to and hold information gatherings about mission and development work, helping the poor in the community etc.)

---

10) Some initiatives are time consuming, others expensive, others again both. This question is similar to the previous. You get 100 points to distribute between different diaconal initiatives, but this time the points represent your economic resources and how you want to use them.

A) “Loving your neighbor”

B) “Creating inclusive communities”

C) “Protection of creation”

D) “Fighting for justice”

---

11) To what degree do you think that it was right including "protection of creation" in ELCN’s Plan for Diakonia, introduced in 2007? (1 = very wrong, 5 = very right)

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

12a) Have you taken courses (everything from workshops to university courses) in eco-diakonia or in environmental protection in general?

Yes ☐ No ☐

12b) If yes, please indicate the course(s) name and organizer(s)/university

---

13a) Do you work, or have you previously worked, with eco-diakonia/protection of the creation?

Yes ☐ No ☐

13b) If yes, please give an overview of diaconal initiatives for 2012. You may very well copy directly from your local diaconal plan less you have done important changes in it.

---

14) What attitudes have you met among the following groups when talking about, or introducing diakonia? (1=very negative, 5=very positive) introducing eco-diakonia?

	1	2	3	4	5	I don’t know/ not relevant
Church members	☐	☐	☐	☐	☐	☐

Congregation board	☐	☐	☐	☐	☐	☐
Priests	☐	☐	☐	☐	☐	☐
Other employees	☐	☐	☐	☐	☐	☐
Partners outside the church	☐	☐	☐	☐	☐	☐
Diaconal board	☐	☐	☐	☐	☐	☐

15a) Many congregations set themselves eco-diaconal goals, like decreasing the electricity consumption or the use of disposable tableware. Have you ever initiated measures to make sure these goals were achieved (e.g. invested in a movement sensitive lamp system, or in reusable plastic tableware for outdoor church services)?

Yes ☐ No ☐ We have no goals to measure ☐

15b) If yes, please specify which measures you have initiated to make sure your goals are achieved

16a) Are you member of an environmental organization?

Yes ☐ No ☐

16b) If yes, please indicate the organizations name

17) Which theological arguments do you find the most important as far as "protection of the creation" is concerned? Concrete biblical or other theological references would be appreciated.

18) Which of the following motivates/would motivate you to work with eco-diakonia?

	Motivates	**Do not motivate**
Reduction of operating expenses, (and resultantly reallocation of funds to other diaconal initiatives)	☐	☐
Fighting for justice and a fair distribution of goods	☐	☐
Animal welfare	☐	☐
Protecting outdoor recreational interests	☐	☐
Contributing to a long term and sustainable use of natural resources	☐	☐
Contributing to save endangered species and habitats	☐	☐

19) Range these possible motives to work with eco-diakonia on a scale, were 1 is what motivates the least, and 6 is what motivates the most

Reduction of operating expenses, (and resultantly reallocation of funds to other diaconal initiatives)	☐
Fighting for justice and a fair distribution of goods	☐

Animal welfare	☐
Protecting outdoor recreational interests	☐
Contributing to a long term and sustainable use of natural resources	☐
Contributing to save endangered species and habitats	☐

---

20) Indicate which of the following statements regarding eco-diakonia you consider true, and which you consider false

	True	False	I don't know
Eco-diaconal initiatives are too expensive	☐	☐	☐
Eco-diakonia take too many resources from other diaconal work	☐	☐	☐
Initiatives to ensure environmental protection have no real effect	☐	☐	☐
I do not feel competent to work with eco-diakonia	☐	☐	☐
It is hard to find volunteers for eco-diaconal initiatives	☐	☐	☐
The church invest in protection of endangered species	☐	☐	☐
Global climate change is man-made	☐	☐	☐
Reduction of climate gas emissions is a task for the church	☐	☐	☐
Eco-diaconal initiatives should focus on reduction of climate gas emissions, because that would ensure a more just world	☐	☐	☐
Global climate change is the largest treat to the conservation of the species and creation as such	☐	☐	☐
The deacon is the ultimate responsible that eco-diaconal initiatives are carried through	☐	☐	☐
Locally produced food is more environmental friendly compared to other food	☐	☐	☐
The most important theological reason to do eco-diakonia is humans stewardship above creation, as described in Genesis 2,15 (The Lord God took the man and put him in the Garden of Eden to work it and take care of it).	☐	☐	☐
I think eco-diakonia is not only about ensuring human welfare, but ensuring the welfare of creation as such	☐	☐	☐
The most important about including "care for creation" as part of the diaconal definition is protecting humans	☐	☐	☐
When buying food to use in church context, I think it is right to prioritize organic products though these are more expensive than other products	☐	☐	☐
The church should support and encourage the protection of natural areas	☐	☐	☐

Initiatives to reduce climate gas emissions have no real effect	☐	☐	☐
Organic products are more environmental friendly than other Products	☐	☐	☐
There is no theological reason to include "care for the Creation" as part of diakonia	☐	☐	☐

21) Which of the following tasks do you think the church should engage in?

	I agree	I do not agree	I don't know
The church should spread information about global environmental issues through its services	☐	☐	☐
The church should spread information about local environmental issues through its services and meetings	☐	☐	☐
The church should spread information about global environmental issues through the media	☐	☐	☐
The church should spread information about local environmental issues through the media	☐	☐	☐
The church should engage in environmental research	☐	☐	☐
The church should engage politically about global environmental issues	☐	☐	☐
The church should engage politically about local environmental issues	☐	☐	☐
The church should have a practical diaconal engagement regarding local environmental issues	☐	☐	☐
The church should have a practical diaconal engagement regarding global environmental issues	☐	☐	☐

23) Any additional comments regarding the survey?

Thank you for your reply!

Appendix B: Survey B

VALUE ORIENTATION SURVEY

Dear respondent,

This survey is developed to measure environmental value orientation.

All who participate can win a GIFT CARD at the Bok & Media bookstore.

Estimated response time is 3-6 minutes. The survey is based upon two international standards to measure value orientation, known as the revised "New Ecological Paradigm" (NEP) and "Schwartz value scale".

The survey is anonymous, and the results will be presented in my master thesis. Respondents can choose to get a free copy of the thesis to read the results from the survey.

Thank you for taking the time to fill out the questionnaire.

Yours sincerely,
Anniken Torset

 Norsk (Bokmål)

 English (US)

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1) Would you like to receive a copy of the thesis with the study results?

Yes ☐ No ☐

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2) Sex

Male ☐ Female ☐

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3) Birth year

☐

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4) Employed as/Member of

Bishop ☐
Deacon adviser ☐
Deacon ☐
Deacon worker ☐
Church council member ☐
Work-group for development of the new diaconal plan ☐
Professor/lecturer ☐
Other (please specify) ☐

☐

5) Diocese

- ☐ Oslo
- ☐ Borg
- ☐ Hamar
- ☐ Tunsberg
- ☐ Agder og Telemark
- ☐ Stavanger
- ☐ Bjørgvin
- ☐ Møre
- ☐ Nidaros
- ☐ Sør-Hålogaland
- ☐ Nord-Hålogaland

6) * Below follows 15 statements regarding environmental issues. For each of the statements, please indicate the extent to which you agree or disagree.

	1 (strongly disagree)	2 (mildly disagree)	3 (unsure)	4 (mildly agree)	5 (strongly agree)
1. We are approaching the limit of the number of people the earth can support.	☐	☐	☐	☐	☐
2. Humans have the right to modify the natural environment to suit their needs.	☐	☐	☐	☐	☐
3. When humans interfere with nature, it often produces disastrous consequences.	☐	☐	☐	☐	☐
4. Human ingenuity will insure that we do NOT make the earth unlivable.	☐	☐	☐	☐	☐
5. Humans are severely abusing the environment.	☐	☐	☐	☐	☐
6. The earth has plenty of natural resources if we just learn how to develop them.	☐	☐	☐	☐	☐
7. Plants and animals have as much right as humans to exist.	☐	☐	☐	☐	☐
8. The balance of nature is strong enough to cope with the impacts of modern industrial nations.	☐	☐	☐	☐	☐
9. Despite our special abilities humans are still subject to the laws of nature.	☐	☐	☐	☐	☐
10. Human destruction of the natural environment has been greatly exaggerated.	☐	☐	☐	☐	☐
11. The earth has only limited room and resources.	☐	☐	☐	☐	☐
12. Humans were meant to rule over the rest of nature.	☐	☐	☐	☐	☐

	1 (strongly disagree)	2 (mildly disagree)	3 (unsure)	4 (mildly agree)	5 (strongly agree)
13. The balance of nature is very delicate and easily upset.	☐	☐	☐	☐	☐
14. Humans will eventually learn enough about how nature works to be able to control it.	☐	☐	☐	☐	☐
15. If things continue on their present course, we will soon experience a major ecological disaster.	☐	☐	☐	☐	☐

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7) * Please indicate how important you consider each of these values. Vary between scores, and rate only few values as extremely important.

	-1 (opposed to my values)	0 (not important)	1	2	3	4	5	6	7 (extremely important)
1. Influence (over people and situations)	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. Peace on Earth	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. Being one with nature	☐	☐	☐	☐	☐	☐	☐	☐	☐
4. Social power	☐	☐	☐	☐	☐	☐	☐	☐	☐
5. Authority	☐	☐	☐	☐	☐	☐	☐	☐	☐
6. Human equality	☐	☐	☐	☐	☐	☐	☐	☐	☐
7. Helpfulness (charity)	☐	☐	☐	☐	☐	☐	☐	☐	☐
8. Preventing pollution	☐	☐	☐	☐	☐	☐	☐	☐	☐
9. Protecting environment and nature	☐	☐	☐	☐	☐	☐	☐	☐	☐
10. Wealth (access to material goods and services)	☐	☐	☐	☐	☐	☐	☐	☐	☐
11. Social justice	☐	☐	☐	☐	☐	☐	☐	☐	☐
12. Respect for the Earth that we live on (living in harmony with nature)	☐	☐	☐	☐	☐	☐	☐	☐	☐

8) To deacons and deacon workers: In the first survey you were asked to write down which initiatives to protect creation you had initiated in your ministries. Due to low response I would truly appreciate if you could send me your local diaconal plans, enabling me to map local diaconal initiatives.

9) Any additional comments

Thank you for your reply!

Appendix C: Interview guide MF/Diakonova

1) Protection of creation was included in ELCN's Plan for Diakonia in 2007. Did this addition to the plan have any consequence for the diaconal education? (If yes, how? If no, why not?)

2) Who and what decide what the MF/Diakonova study program should consist in?

3) All diakonia has a theological fundament. Do you teach students about the **theological justification** for eco-diakonia? If yes, please tell me more about it. You may think about any mandatory or voluntarily classes or curriculum you offer for students, or about the access to staff and lecturers with a good theological knowledge about eco-diakonia (protection of creation).

4) Which theological arguments do you find the most important to defend eco-diakonia?

5) According to the MF/Diakonova study plan, the deacon study "should contribute to students development of diaconal **attitudes and identity** as guidelines for service in church and society". Do your study program contribute to students' eco-diaconal attitudes, and present eco-diaconal service as part of the deacons' identity? (If yes, please specify how. If not, why not?)

6) According to ELCN's definition of diakonia, diakonia is the "gospel in practice". Diakonia is also known as the Church's "care service". According to MF/Diakonovas study plan for diakonia, the deacon program should "empower students to diaconal service in church and society". My question is, are the students offered curriculum, lectures or practice in **practical implementation** of eco-diakonia. (If yes, please specify. If not, why aren't students empowered in practical implementation of eco-diakonia?)

7) How important do you think it is to educate the master students in "protection of the creation" compared to other diakonia (charity, creating inclusive communities, and fighting for justice)

1 (much less important), 2 (less important), 3 (equally important), 4 (more important), 5 (much more important)

8) Through former studies and practice, most deacon students have much theoretical and practical experience in working with people, but few have knowledge about protection of nature and creation. Do you think the deacon study should compensate for this, or should it be up to the students to acquire such knowledge?

9) What do you think is the most important reason for including ”protection of creation” in the plan for diakonia?

10) How would you define protection of creation?

11) How would you describe your engagement in environmental issues?

12) Have you thought about/discussed how to improve the eco-diaconal education in your study program?

13) Do you have plans to make changes in your eco-diaconal education?

14) Is there anything you would like to add?

Appendix D: Interview guide Diakonhjemmet

1) Protection of creation was included in ELCN's Plan for Diakonia in 2007. Did this addition to the plan have any consequence for the diaconal education? (If yes, how? If no, why not?)

2) Who and what decide what the Diakonhjemmet's study program should consist in?

3) All diakonia has a theological fundament. Do you teach students about the **theological justification** for eco-diakonia? If yes, please tell me more about it. You may think about any mandatory or voluntarily classes or curriculum you offer for students, or about the access to staff and lecturers with a good theological knowledge about eco-diakonia (protection of creation).

4) Which theological arguments do you find the most important to defend eco-diakonia?

5) According to the Diakonhjemmet's study plan does the "educational task first and formost consist in interpreting the deacons educational needs and professional identity". Do you think your study program contribute to development of eco-diaconal attitudes, and present eco-diaconal service as part of the deacons' identity? (If yes, please specify how. If not, why not?)

6) According to ELCN's definition of diakonia, diakonia is the "gospel in practice". Diakonia is also known as the Church's "care service". According to Diakonhjemmet's study plan for diakonia, students should develop practical abilities in diakonia. Consequently, I wonder if students are offered curriculum, lectures or practice in **practical implementation** of eco-diakonia. If yes, please specify. If not, why aren't students empowered in practical implementation of eco-diakonia?

7) How important do you think it is to educate the master students in "protection of the creation" compared to other diakonia (charity, creating inclusive communities, and fighting for justice)

1(much less important), 2(less important), 3(equally important), 4(more important), 5(much more important)

8) Through former studies and practice, most deacon students have much theoretical and practical experience in working with people, but few have knowledge about protection of nature and creation. Do you think the deacon study should compensate for this, or should it be up to the students to acquire such knowledge?

9) What do you think is the most important reason for including ”protection of creation” in the plan for diakonia?

10) How would you define protection of creation?

11) How would you describe your engagement in environmental issues?

12) Have you thought about/discussed how to improve the eco-diaconal education in your study program?

13) Do you have plans to make changes in your eco-diaconal education?

14) Is there anything you would like to add?

Appendix E: Evaluation of Survey A

Some data in Survey A where only used indirectly. E.g. were respondents reporting membership in an environmental organization asked to give the name of the organization. This resulted useful, since 31% (5 out of 16) reported organizations that are either not membership organizations or that are not environmental organizations. The additional data made it possible to exclude incorrect information on membership.

Other parts of the Survey A data were not at all used, either because of low relevance, or because of quality restrains. This appendix discusses weaknesses of the survey, and explains why some data were discharged[15].

Question (Q) 5b: In the scope of this thesis design, one major challenge was that only 19 of the respondents finished their diaconal degree after 2007, when *protecting creation* was included in the diaconal definition. In total 53% graduated before 2007, and 23% were deacon workers. Another weak point was that 63% of the respondents were educated at Diakonhjemmet. Among the resting 37% that were shared between four different educational institutions, only 4,11% (n3) were educated at MF/Diakonova. Comparisons between the education institutions were therefore inpossible to carry out statistically.

Q5c: Measuring correlations with educational institution were deacons graduated was not possible because the majority of the sample had taken their education at Diakonhjemmet. Diakonhjemmet is the educational institution with the longest history in diaconal education, which probably explains this trend.

Q5d and 5e: Questions 5d and 5e were not included because of large inconsistencies in the answers. Though considerably many deacons reported that the they felt that their diaconal education had considerably contributed to their knowledge about protection of creation (5d), only a handful of the most resent graduated deacons were able to mention concrete themes (5e). Some answered nothing or said that they could not remember anything in particular. Others again would mention themes not related to *protection of creation*, despite this being defined in the survey. This indicates that deacons understanding of eco-diakonia is low.

[15] For response alternatives to questions, see Appendix A

Q6: Almost all diaconal employees had bachelors in nursing, social work or pedagogic. These are related sciences, and consequently there were no statistical significant correlations with pre-diaconal education. The few theologians among the diaconal employees (all men) had a higher pro-environmental attitude than others. Nevertheless, they were too few to defend the trend statistically.

Q8: Most diaconal employees (83%) reported that they had large or full freedom to decide which parts of diakonia they wanted to work with. Having a lower degree of freedom was not related to behavior. This indicates that most diaconal worker could have included protection of creation if they wanted. Nevertheless, these data were excluded from the result section because its relevance was limited when few respondents gave detailed information about their diaconal practice (see Q13b).

Q9: In the survey A test survey, a number of diaconal working tasks where listed, and respondents asked to indicate about how many percentage of their working time they used on each diaconal task. The test respondents reported this question was too complicated to answer. Consequently questions were rephrased, asking how much time respondents used within each of the four diaconal working areas as defined in the diaconal definition (Q9). Realizing that some of the working areas demanded more time, while other demanded more money, a similar question regarding use of economic resources (Q10). In retrospect it appears obvious that these questions were too ambitious questions. There are unclear transitions between most tasks, and several respondents reported that they were unable to respond satisfactory.

Q15: Respondents were asked if they had included eco-diaconal goals in their ministries. Despite defining the term “goals”, many respondents did not seem to understand this question. I therefore excluded the data.

Q19: In addition to asking respondents which factors motivated them, respondents were also asked to prioritize between the factors from what motivated the most, to what motivated the least. Many respondents did not understand this task, and wrote in the comment field that they would have wanted to range several factors as equal. The survey software, QuestBack, did not allow them to do this, with the consequence that many did not respond to this question in the correct way.