

**A SYSTEMATIC LITERATURE REVIEW ON
SOCIAL WORK CONSIDERING
ENVIRONMENTAL ISSUES
AND SUSTAINABLE DEVELOPMENT**

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SUMMARY

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The purpose of this thesis is to explore the relationship of social work and environment, especially biophysical environment. On the grounds of the previous research concentrating mainly on theoretical frameworks this study explores existing practices and features of social work addressing environmental issues and sustainable development. This translates into examining examples of actualized social work efforts that not only address social issues but consider environmental and sustainability questions also.

The study is conducted applying a systematic literature review method to retrieve the relevant literature and to ensure the quality of data. The data of this study consists of 29 articles published in refereed social work journals or edited books considering social work and environment. This data is analyzed applying content analysis resulting in a description of actualized social work practices considering environmental and sustainability issues.

Social work practice addressing environmental issues and sustainable development is both developing and improving the living environment, physical infrastructure and facilities, as well as ensuring participation and empowerment of people. It is also promoting environmental justice, increasing awareness of environmental issues and their social impacts, negotiating what issues to address, and also gathering the resources and partners necessary to deal with these issues. The efforts are locally bound, community-based and often multidisciplinary. Many of the activities are adopted from mainstream social work but accommodated to social work considering issues related to biophysical environment.

Keywords: social work, environment, sustainable development, eco-social work, ecological social work, environmental social work, green social work

TIIVISTELMÄ

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A Systematic Literature Review on Social Work Considering Environmental Issues and Sustainable Development

Sosiaalityö

Pro gradu-tutkielma

Yhteiskuntatieteellinen tiedekunta

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Tutkimuksessa tarkastellaan sosiaalityön suhdetta ympäristöön ja kestävään kehitykseen. Tässä tutkimuksessa ympäristöllä viitataan erityisesti fyysiseen elinympäristöön ja luontoon. Aiempi tutkimus tarjoaa ympäristöön ja kestävään kehitykseen kohdentuvaan sosiaalityöhön pääasiassa teoreettisia malleja. Tässä tutkimuksessa tarkastellaan sen sijaan toteutuneita sosiaalityön käytäntöjä ja niiden erityispiirteitä.

Tutkimuksen menetelmänä on käytetty systemaattista kirjallisuuskatsausta. Aineisto koostuu 29 englanninkielisestä artikkelista, jotka on julkaistu sosiaalityön tieteellisissä, vertaisarvioituissa lehdissä tai sosiaalityötä ja ympäristöä käsittelevissä kokoomateoksissa, ja joissa kuvataan toteutunutta, elinympäristöön kohdentuvaa sosiaalityötä. Aineiston analyysimenetelmä on sisällönanalyysi, jonka tuloksena on saatu kuvaus sosiaalityön käytännöistä ja piirteistä aineistossa.

Ympäristöön ja kestävään kehitykseen kohdentuva sosiaalityön käytäntö koostuu yhtä lailla fyysisen elinympäristön, infrastruktuurin ja laitteistojen kehittamisestä kuin ihmisten osallistumisen ja vaikutusmahdollisuuksien edistämisestä. Ympäristötietoisuuden lisääminen ja huolehtiminen ympäristöön liittyvien hyötyjen ja haittojen oikeudenmukaisesta jakautumisesta ovat osa käytäntöä. Ympäristöön kohdentuvaan sosiaalityöhön sisältyy myös ympäristön muutosten vaikutusten arviointi, työn kohteesta ja keinoista neuvottelemisen sekä tarvittavien resurssien ja yhteistyökumppaneiden kokoaminen. Työ on usein yhteisötyötä, joka määrittyy paikallisesti ja toteutetaan monialaisena yhteistyönä. Käytännöt ovat monelta osin yhteneviä sosiaalityön kanssa yleisesti mutta sovellettu siten että ne vastaavat paitsi sosiaalisiin myös ympäristöön ja kestävään kehitykseen liittyviin tarpeisiin.

Asiasanat: sosiaalityö, ympäristö, kestävä kehitys, ekososiaalinen työ, ekologinen sosiaalityö, ympäristösosiaalityö

CONTENTS

ABSTRACT
TIIVISTELMÄ
CONTENTS

FIGURES AND TABLES

1 INTRODUCTION	5
2 PREVIOUS RESEARCH AND RESEARCH QUESTION	7
2.1 Development of research on social work and environment	2
2.2 Research question	10
3 THEORETICAL FRAMEWORK	13
3.1 Approaches to environment in social work	13
3.2 Conceptualizations of environmentally-oriented social work	15
3.3 Outlines for practice in literature	18
4 RESEARCH METHODS AND PROCESS	23
4.1 Research methods	23
4.2 Ethical implications	27
4.3 Research process	28
5 DESCRIPTION AND CRITICAL APPRAISAL OF DATA	35
5.1 Description of articles	35
5.2 Summarization of data	40
6 RESULTS	43
6.1 Social work practices in the data	43
6.2 Features of social work in the data	53
6.3 Summarization of results	56
7 CONCLUSIONS	58
BIBLIOGRAPHY	62
ANNEX 1 TABLE OF DATA	

FIGURES AND TABLES

FIGURES

Figure 1 Practices of social work addressing environmental issues and sustainable development	56
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TABLES

Table 1 Search databases, results, and attributes	30
Table 2 Developing technical infrastructure	44
Table 3 Supporting natural resources management and agriculture	45
Table 4 Supporting grassroots economy	45
Table 5 Environmental restoration and protection	46
Table 6 Assessing community needs and impacts	47
Table 7 Increasing awareness and information	48
Table 8 Ensuring participation and empowerment	49
Table 9 Ensuring environmental justice	50
Table 10 Accumulating and coordinating resources	51
Table 11 Adopting and supporting sustainable practices at work and home	52

1 INTRODUCTION

I visited New York City in 2012 during the aftermath of Occupy Wall Street demonstrations of 2011. What I witnessed was young people living in the streets, holding cardboard signs demanding change in the economic system, but also begging for small change from passers-by. What bothered me was whether the society has means to help these people without economic growth and the following burden to the Earth. This led me into considering the relationship between social work and the environment.

This thesis examines how social work responds to the challenge of taking environmental issues into account by exploring existing practices and features of social work considering environmental issues and sustainable development. This is achieved by conducting a systematic literature review (Aveyard 2010; Saini & Shlonsky 2012). Firstly, this study is about social work broadening its interest in environment that considers not only social factors but the biophysical environment also (e.g. Matthies, Närhi & Ward 2001; Coates 2003; Dominelli 2012). Added are the challenges of our time such as environmental degradation and climate change, and the pursuit of sustainable development. Sustainable development, even though a contested concept, refers to environmentally, socially, and economically sustainable future where economic growth does not happen on the expense of natural environment or some people and countries (Buckingham & Kina 2015, 817). Besides sustainability there is a growing interest in resilience, allowing people, and communities to cope with effects of environmental challenges such as climate change (previous, 819).

The discussions on social work and environment have a long history. The concept of environment in social work has mostly related to social environment (e.g. Karls & Wandrei 1992, 81). In the last two decades the discussions have developed from recognizing significance of not only social but also physical environment, and the effects of environmental degradation to human wellbeing, eventually acknowledging also spiritual human-nature relationship. (Besthorn 2015; Gray, Coates & Hetherington 2013, 11.) The new approach to environment in social work has resulted in several conceptualizations and approaches to environment in social work such as eco-social work, environmental social work, deep-ecological social work, ecospiritual social work and green social work (Besthorn

2015, 874). Besides criticism against concentrating on social environment only, social work has also been criticized for not recognising modern development and the demand for constant growth as a reason for social and environmental injustices. These critical voices have demanded new values and approaches in social work. (E.g. Närhi & Matthies 2001; Coates 2003, 39.)

Environmental issues and sustainable development are current on global agenda. United Nations' new millennium development goals, the 2030 agenda for sustainable development, have been launched in September 2015 (United Nations 2015). An agreement on fighting the climate change was also settled in 2015. Moreover, social work associations have put attention on environmental issues in the last years. International Federation of Social Workers published a policy statement on globalisation and environment in 2012 calling for social workers to recognise the impact of environmental degradation on people, and developing environmental responsibility and care in social work practice (IFSW 2012). Also the soon expiring Global Agenda 2012–2016 launched by IFSW, International Association of Schools of Social Work, and International Council on Social Welfare states that working towards environmental sustainability is among common social work priorities (IFSW, IASSW & ICSW 2012, 1).

Environmental crisis have social impacts relevant to social work (McKinnon & Alston 2016). Changing and in many cases deteriorating living environments affect people's health and wellbeing. Besides this, they can be seen as a question of human rights. Social and environmental justice are linked to each other as environmental crisis harm especially those already in a vulnerable position (McKinnon 2012, 266, 274–275), and because social injustice and exploitation of nature stem from the same ways of thinking (Coates 2003, 6).

This study is targeted to anyone interested in social work and environment. It is conducted in a limited scope of a thesis but intended to spark imagination on how to consider environmental issues in one's work. In chapter 2 I start with a glance on the research on the subject. Chapter 3 provides an overview on approaches to environment in social work. Chapters 4 and 5 cover the research methods, process, and data of this study. In chapters 6 and 7 I explicate the results and conclusions, describing existing social work practices addressing environmental issues and sustainable development.

2 PREVIOUS RESEARCH AND RESEARCH QUESTION

2.1 Development of research on social work and environment

I got interested in the relationship of social work and the natural environment when the expanding discussion on the subject had already resulted and was yet resulting in several comprehensive publications and literary reviews (e.g. Bexell & Rechkemmer 2016, unpublished; McKinnon & Alston 2016; Hessle 2014; Gray, Coates & Hetherington 2013; Molyneux 2010). The dawn of literature on social work and environment can however be traced back decades before. The concept of environment was crucial for settlement social work pioneering social work already in the turn of the 19th and 20th centuries. Back then it was not about the natural but rather about the social and physical environment that city-dwellers led their lives in. (Närhi & Matthies 2001, 17.) Settlement social workers strived to ameliorate the environmental conditions affecting individuals, families, and communities rather than concentrating on individual people. Wellbeing was pursued through efforts to improve for example sanitation systems, housing conditions, and possibilities for recreation. (Besthorn 2015, 871.) Thus the notion of physical environment is not indeed new to social work. However, the environmental challenges of and reasons for social inequities may these days be partly different, such as climate change and depletion of natural resources.

After the early days of social work it took decades before acknowledging the relationship between humans and physical environment and especially nature in social work literature. In the late 1960s considerations on environmental issues started to appear in social work discussions, though mainly relating to social environment (Coates 2003, 41). Discussions on the relationship between social work and natural environment have been emerging slowly and scattered in different areas and traditions. Even in the Western sphere, European, especially German, and Anglo-American social work discussions concerning environment have had slightly different emphasis and timing (Payne 2014, 185; Närhi & Matthies 2001). But as awareness of impacts of environmental conditions on people and societal development has increased, so has also the significance of nature in social work (Alston & Besthorn 2012, 58).

According to Gray, Coates & Hetherington (2013) there have been three stages in social work engagement in environmental issues. The first stage from 1970s onwards was adapting

the ecological approach in social work. This meant recognizing the significance of environment for individual and community development, even though it was mostly social aspects of environment that were considered. The second stage took place in the late 1980s and 1990s and was provoked by environmental justice movement and concerns about environmental degradation due to waste, pollution, and unsustainable agricultural practices, and injustice these caused upon some groups of people. The third and current stage of development of environmental issues in social work is broadening respect for natural environment, its impacts for human wellbeing, and spiritual implications that nature and place carry for people. (Gray, Coates & Hetherington 2013, 11.) The discussions have thus developed from recognizing effects of environment on people and acknowledging the impacts of environmental degradation to human wellbeing, to pondering also spiritual human-nature relationship. From the standpoint of this thesis especially the endeavours to combine environmentalism to social work theory and practice in the late 20th century are important.

An example of expanding literature on social work and environment are the literature reviews published on the subject. Rebecca Molyneux (2010) conducted a literature review on ecosocial work literature, going through 21 pieces of literature published between 2000 and 2010, found in databases and the webpage of the Global Alliance for Deep-Ecological Social Work (www.ecosocialwork.org). Molyneux discovered that the ecosocial literature included in the review promoted for expanding the person-in-environment approach in social work to better acknowledge the importance of physical environment and ecological aspects. She found that there were not many practical applications offered, but mostly a rhetorical commitment to ecosocial work. Thus she declared that developing practice was necessary. (Molyneux 2010, 66–67.) Sarah Bexell and Andreas Rechkemmer (2016, unpublished) conducted a systematic literature review processing peer-reviewed articles, social work reports, white papers and policy documents published between 2010 and 2015 to uncover gaps in sustainable development themes directly relevant for social work practice. They found that social work research mainly lacks identification of the impacts of environmental changes on human and social development and especially on human health, wellbeing, security and survival. The prevalence and severity of these changes also go unnoticed. Bexell and Rechkemmer concluded that it is imperative to recognise and raise awareness of how environmental changes and damage impact not only people and their living conditions, but

resulting from this, social work issues and practice in macro, mezzo and micro levels. (Bexell & Rechkemmer 2016, unpublished.)

Even though the literature on the relationship of social work and natural environment is rich in traditions and approaches, there are prevailing themes that can be specified. Fred H. Besthorn's (2015) review of the recent ecological social work (concept used by Besthorn) literature revealed some overarching themes in current discussions on the subject. He concluded that in ecological social work, there are on-going attempts to expand conventional person-in-environment perspective framing social work theory and practice. In practice this means for example developing responses to environmental degradation and natural disasters and introducing ways to limit harmful consumption. Additionally, it means incorporating nature and deeper ecological thinking into social work practice, involving communities in creating ecological awareness and sustainable development, and finding "the interface between economic globalisation and strengthening social capital as a catalyst for creating sustainable livelihoods and community security". (Besthorn 2015, 874.) There are more specific foci to be found, such as food security, disaster management, or limiting fossil fuels, that have to do with social work also (previous). Thus the literature covers a variety of issues related to environment and relevant to all fields of work pursuing sustainable development.

As discovered by Molyneyx (2010) and Bexell and Rechkemmer (2016, unpublished), there are some significant gaps in the literature when it comes to integrating environmental and sustainability issues in social work research and practice. Already in 2001, Christine Marlow and Colin Van Rooyen conducted a survey exploring existing ways of combining physical environment and environmental issues in social work. They ended up calling for further development of theories for practice and interventions followed by examination of their effectiveness. They noted that different clientele in different contexts demand for different kinds of approaches and interventions, preferably backed up by research. (Marlow & Van Rooyen 2001, 252.) When Molyneux (2010) executed her literature review almost ten years later, the article written by Marlow and Van Rooyen was still one of the few articles exploring real-world practices of eco-social work. Later on, Susan Kemp (2011) assessed the status of and opportunities for developing environmentally-oriented social work. Reviewing existing conceptual frameworks, research, and practice, Kemp found social work still far from including environmental issues in practice. She concluded that there is a need for "a creative, multifaceted and well-specified menu of practice theories, models and

interventions, supported by research and practice evidence” (Kemp 2011, 1206). As Molyneux’s (2010) and Kemp’s (2011) calls for development of practice echoed Marlow and Van Rooyen (2001), it does not seem like much had happened in ten years between.

The lack of literature on social work practice addressing environmental issues implicates future research needs on the subject. As majority of the literature takes a theoretical approach, a more practice-focused and descriptive approach is welcomed if social work is to be involved in efforts for protecting the environment and promoting sustainable development (Kemp 2011; Molyneux 2010). This gap in social work literature and the currently expanding discussions on social work, environment, and sustainability provide a basis for this thesis.

2.2 Research question

Molyneux (2010) observed that ecosocial literature is mainly theoretical and does not provide blueprints for ecosocial practice. Even though she conducted the literature review not more than six years ago, the ecosocial literature has been expanding since. The edited books on the subject (e.g. McKinnon & Alston 2016; Hessle 2014; Gray, Coates & Hetherington 2013) published in recent years have not only argued for environmental approach in social work but have also presented some concrete practice examples. At the same time social work discussions on environmental issues and their social consequences are growing more popular, and social work journals publish special issues and articles on the subject, probably also providing with practice examples. However, the reality that practice examples are scattered in literature still makes it difficult to grasp what existing environmentally-oriented social work practice is like, not to mention how to apply environmental approach in one’s own work. Thus, the research problem of this thesis is the disunity of information on social work practice addressing environmental issues.

As there already are plenty of theoretical frameworks available I concentrate on existing, actualised social work efforts considering natural or biophysical environment and / or sustainable development. The following research question is

What are the existing practices and features of social work considering environmental issues and sustainable development?

The question is descriptive in essence and requires gathering a set of data enabling synthesis to explore the features and forms of social work practice. The difference of this study compared to previously depicted literature reviews is the focus on defining existing practice instead of overviews of environmentally-oriented social work literature, be it theoretical or practice-oriented.

There are some limitations to this study to be addressed already in this stage. It is not my aim to define social work specifically but to explore social work practice addressing environmental or sustainability issues. Following the example of the Sage Handbook of International Social Work (Lyons, Hokenstad, Pawar, Huegler & Hall 2012, 1), in this study social work embodies a diverse group of social work professionals with different titles and training, working in different agencies and environments in various countries and regions across the globe. Data depicts both professionally regulated and unregulated social work and social work organised by public sector and various non-profit or non-governmental organisations. For example in India university-level social work and voluntary approaches exist hand-in-hand despite the tensions (Ranta-Tyrkkö & Das 2016, 145). Even though social work is rather loosely defined in the study, concentrating on existing, explicitly social work activity may exclude practice examples that could be adapted by social workers. If the aim would be only to provide some practice examples for social workers for embracing environmental values and issues, this strict demarcation would not be necessary. However, concentrating on social work may raise profession's profile in environmental and climate change efforts.

There are also some demarcations even in the social work realm. In social work literature disaster relief is included in social work efforts concerning the environment (e.g. Dominelli 2012). As the emphasis of this thesis is on social work possibilities for protection of the environment and promotion of sustainable development, and as there already exists a recent literature review on social work as post-disaster work (Rapeli 2016, in Finnish), it is excluded from this thesis. The exclusion is somewhat artificial because of the suspicion that extreme weather events increase due to human action and climate change even though single natural disasters cannot be linked to it (IPCC 2014, 53; Dominelli 2013, 431–432), and also because mitigation and recovery activities overlap in practice. Some crisis such as droughts may be considered a normal part of operating environment and thus social work dealing with these issues is not essentially disaster relief (Stehlik 2013). Also green care (e.g. Sempik,

Hine & Wilcox 2010), including for example wilderness- or animal-assisted therapy, is intentionally left out because of the focus on caring for environment. The discussions on disaster work and green care are also extensive and might dominate the literature review.

3 THEORETICAL FRAMEWORK

In this chapter I navigate through the central approaches to the relationship between social work and environment and round up discussions to create an understanding of practice implications of these approaches. Overviewing these discussions is important if assuming these have influenced existing practices of social work considering environmental issues.

3.1 Approaches to environment in social work

Person-in-environment thinking is a crucial part of social work theorizing and practice, covering many different approaches to environment in social work. Mostly it has been translated in terms of social environment (e.g. Karls & Wandrei 1992, 81). Systems theoretical thinking was introduced in social work in the 1960s (Coates 2003, 41). It offered a framework for examining complex processes through which personal factors and social systems interact. In social work also systems theoretical thinking has concentrated mainly on social environment as a social work domain, for example helping to understand how people in families or communities affect each other, and thus to support working connections. (Payne 2014, 184.) Even though systems theoretical thinking enabled a holistic approach in social work and recognizing individuals as part of larger social systems, it has been criticized for lacking interest in ecological aspects other than social, especially physical environment and nature (Närhi & Matthies 2016, 27, Payne 2014, 190; Närhi & Matthies 2001, 30). The critique has been raising since 1980s and 1990s, as the understanding of connections between environmental degradation and social injustices has increased (Coates 2003, 54).

The concept of environment can be perceived in a broader sense in social work, not only recognising social aspects of environment but biophysical environment and human-nature relationship also. For example Coates (2003, 9) applied systems theoretical thinking, presenting the destiny of humankind interconnected with the destiny of other forms of life and the whole earth. The eco-social (or ecosocial, depending on the author's preference, which I in each case follow) approach in social work applies systems theoretical thinking but expands the concept of environment and the focus of social work to include biophysical

environment also. It embraces both social and environmental questions as social work domain. (Matthies, Närhi & Ward 2001, 5–6; Närhi & Matthies 2001, 40.)

Under the realm of eco-social approach a more radical eco-critical approach is distinguishable. Eco-critical social work intrinsically criticizes modern industrial society from ecological viewpoint (Närhi & Matthies 2001, 24, 45). According to the eco-critical perspective, a change of economic system is necessary to put an end to both destruction of environment and deepening social inequalities. The critique is targeted not only at modern industry and agriculture, but the values and ways of living in the modern society as well: over-consumption, exploitation of both people and nature, and anthropocentrism in the expense of natural environment and other species. (Dominelli 2012, 194; Närhi & Matthies 2001, 32.) The eco-critical tradition in social work theory calls for a new eco-social and eco-critical paradigm for social work. This means not accepting current capitalistic model demanding constant economic growth. It also means questioning the approaches and values of mainstream social work. Eco-critical social work approach requires allowing politics into the sphere of social work, introducing social workers as political actors and social work as a means for social change. The need to redefine social work connects eco-critical and eco-social approaches to critical, structural, radical, feminist, and post-modern traditions of social work. (Närhi & Matthies 2001, 32.) Also Coates (2003, 39) concludes that social work has failed to acknowledge the modern development and the demand for constant growth as primary reasons for social and environmental injustice.

Sven Hesse (2014, 2) states that this new outlook on physical environment and nature in social work may be called a paradigmatic shift in our attitude to person-in-environment. Recognising environmental issues in social work requires recognising interdependence of humans and nature, and striving for change to respond to ecological problems (Payne 2014, 190). This may not have yet been adapted by mainstream social work. Besthorn notes that despite of social work acknowledging impacts that environment has on individuals, social work practice still concentrates on the individual as the environment is harder to address or change (Besthorn 2015, 871–873). As environmental issues gain attention and increase in importance in the society and thus in the social sciences as well, the conventional systems theoretical and the eco-critical approaches are merging (Närhi & Matthies 2001, 39). A healthy environment and the pursuit of sustainable development are considered self-evident

objectives, even though the fiercest critique of modern industrial society is not common to all social work.

3.2 Conceptualizations of environmentally-oriented social work

The new outlook on biophysical environment in social work needed positioning in social work theoretical realm, but also a concept of its own to stand out from the conventional focus on social environment. Few of the conceptualizations of this new approach taking shape in social work are ecosocial work, environmental social work, deep-ecological social work, ecospiritual social work and green social work (Besthorn 2015, 874). Some scholars prefer *ecological social work* (e.g. McKinnon & Alston 2016) which implies social work recognition of interconnectedness of people and environment. Here the ecological environment contains biophysical environment as well as social, cultural, political, and economic systems. Ecological social work provides a framework for understanding interaction between individuals, organisations, communities, or societies and their environments, and also for assessing the outcomes of interventions taking into account the interconnectedness of these systems. (Besthorn 2015, 875.)

Also previously introduced *eco-social social work* extends the focus of social work on both social and biophysical environments (Peeters 2012a, 19). It is an umbrella concept bringing together not only different aspects of environment in social work but also different social work responses to environmental issues and ecological crises (Matthies, Närhi & Ward 2001, 8). Like ecological social work, eco-social approach does not imply a certain method of social work, but is more of a value-based approach applicable in social work. The objective of eco-social approach is to promote socially and ecologically sustainable development and a balanced relationship between humans and the natural environment. Processes of exclusion and integration are of a special interest. Embedded in eco-social there is the eco-critical perspective which implies that social inequalities are connected to modern industrial society and environmental issues. Thus a new outlook on environment and renewed values, policies, and practices are necessary in social work. (Previous, 12.) Compared to ecological social work eco-social approach seems to have stronger practical implications. According to Kati Närhi and Aila-Leena Matthies participation, empowerment and social action striving for change are pivotal in eco-social social work practice. It requires political stance and political

action of social workers, which is not something taken for granted in conventional social work. (Närhi & Matthies 2001, 33.) Even though it provides some approximate outlines for practice, eco-social approach is essentially a reflective perspective on social work and a theoretical-methodological approach to combine ecological and environmental issues to social work (previous, 36).

The concept of *environmental social work* is in many ways similar to eco-social approach. It combines social work discourses and approaches to promote sustainability and environmental and social justice. It calls for rejecting anthropocentrism and recognizing the connection between wellbeing of people and wellbeing of nature, limits of environment, and the humane need to connect to nature. Similarly to eco-critical approach, environmental social work calls for challenging materialistic definitions of progress and promotes social work action for change. (Gray, Coates & Hetherington 2013, 6–10, 22.) In environmental social work practice emphasis is on preventive work, sustainable community development, and finding social solutions to environmental problems. Mel Gray, John Coates and Tiani Hetherington provide a detailed typology of social work practice on environmental issues, categorizing different environmental concerns and suggesting micro-, mezzo- and macro-level social work solutions (Gray et al. 2013, 13–16).

Deep-ecological social work approach highlights intrinsic value of non-human world and spiritual connection between humans and nature. Deep-ecological approach conveys an ecocentric worldview implying inseparability of human and non-human world. Embracing deep-ecological approach requires letting go of human-centeredness and core values and practices of modern industrial societies. (Besthorn 2012, 250–252.) Thus it annexes with eco-critical tradition in social work considering environmental issues. Deep-ecological approach combines environmental and social justice as deep justice, not only because of social problems resulting from environmental issues, but because of the intrinsic value and moral considerability of both human and non-human world (previous, 255).

Green social work portrayed by Lena Dominelli (2012) addresses the relationship between people and nature and the structural inequalities leading to environmental and social injustice. Green social work acknowledges the intrinsic value of nature in a world dependent on its resources. It promotes environmental and social justice and rights and sustainable

development by mobilizing people to protect their living environment and to increase resilience and coping capacities of people and communities. (Dominelli 2012, 64–65.) Green social work also strives for profound change and calls for political stance in social work (previous, 195). It shares a lot in common with eco-social and environmental social work approaches, including the eco-critical perspective. As a practical orientation green social work aims to provide responses to contemporary environmental challenges such as climate change, natural disasters, and environmental degradation, plus social challenges resulting from these (Dominelli 2012).

The *ecospiritual social work* perspective also promotes a holistic understanding of the world and recognition of interdependence of all life. According to ecospiritual approach the worldview and values of indigenous cultures provide an alternative in the quest for a world that is sustainable and just. (Coates, Gray & Hetherington 2006, 388–389.) Eco-social, environmental, deep-ecological, and green social work approaches all draw on the indigenous approach to nature and the spiritual connection between people and nature (Rambaree 2013, 262). Indigenous social work implies a connection between people, other life, and land. This connection is perceived as multi-dimensional: physical as well as spiritual and mental. Indigenous approach focuses on this relationship instead of anthropocentrism. Indigenous social work annexes to critical social work theories as it pays attention to ecological and social justice, distribution of power, and oppression. (Hart 2015, 804, 807.) Thus it provides a reference point for both social work embracing human-nature connection and the criticism against modern industrial values and practices.

The field of concepts combining biophysical environment to social work is constantly evolving. The newcomer in the repertory of concepts is conservation social work. Besides considering natural environments in social work it addresses the problematic relationship and interaction between humans, nonhuman animals and nature (Conservation social work 2016). However, all traditions and conceptualizations of social work considering biophysical environment carry the fundamental implication for social work to broaden its scope on environment and recognise humans as part of nature (Alston, Matthies & MacKinnon 2016, 218; Närhi & Matthies 2016, 29). The downside of the conceptual profusion is that social work discussions of natural environment seem incoherent and thus remain in the margins of social work. On the other hand, the abundance of conceptualizations may as well imply to expanding interest in environmental issues in social work.

3.3 Outlines for practice in literature

Social work practice can be defined as a constellation of value, purpose, sanction, knowledge, and method put into action (Bartlett 2003, 267). It is not something fixed or permanent but influenced by the situation and formal and informal theories applied. Basically, social workers construct social work practice by how they do social work and what decisions they make. (Payne 2014, 4–7.) Even though the existence of universal definition of social work practice may be contested and actual practices vary, defining practice is important to distinguish social work from other professions and to make it understandable for clients and other stakeholders (Gambrill 2003, 312). Social work approaches considering biopsychical environment suggest that social work should recognise the interconnectedness of humans and nature and address environmental issues in social work practice. In this subchapter I round up practice proposals in social work literature to provide an understanding of the vision and guidance available for social workers embracing environmental questions and values in their work.

According to the literature review by Molyneux the ecosocial literature overwhelmingly advocated for a more inclusive ecological framework for social work but a practical framework was seldom offered. The approaches to practice appeared somewhat abstract and detached from everyday social work with service users. (Molyneux 2010, 64-66.) Coates (2003, 158) had provided an idea of holistic social work promoting transition of the society by expanding consciousness of people being part of Earth, ensuring participation, and building a strong non-profit sector responding to needs of belonging and equality. Annie Muldoon had suggested that social work should promote profound change of modern values by reorganising communities to respond to the need of protection of the environment. She deemed this necessary because environmental preservation is the ultimate prerequisite for human wellbeing, and thus working for environmental protection translates into protecting the community as well. (Muldoon 2006.)

After Molyneux's review there are more recent practice models developed bringing together social work and sustainability efforts. For example Jef Peeters' social-ecological practice model of social work engages the profession in a process where people are empowered through participation to reduce social marginalization and to improve people's ability to

impact their environment (Peeters' 2012a, 12–13). Arielle Dylan (2013, 71) pictures social work supporting transition to sustainable society by operating on both local and global level, getting involved in social and environmental justice, rights discourse, advocacy, restoration, remediation, community work, and multisectoral practices. There are also some established models for working towards social and environmental sustainability in a community, such as transitions town initiative (Hopkins 2008), even though Peeters (2016b, 211) perceives transitions town initiative lacking the social capital building necessary to achieve profound social change. Common to these practice models is the ultimate goal of a profound transition towards sustainability. Eco-social transition is a transformation to a sustainable society which requires changes in all aspects of society: ecological, technological, economic, social, political, and structural-institutional (Peeters 2016a, 177–178; Peeters 2016b, 200; Peeters 2012b, 290, 293). Also common to these models, apart from transitions town initiative, is social work as a pivotal agent in promoting a fundamental change of values and practices, employing many tactics to engage communities in this change.

According to Peeters social work contributes by empowerment via promoting participation and developing capability for social action. At best, aspiration for sustainability and contribution of social work can result in social change and improving resiliency of communities and societies. (Peeters 2012a, 12–13, 17.) To build resiliency, the most important effort is to bring people together to learn and build networks, putting emphasis not only on social but environmental sustainability also (Peeters 2016b, 213). Also Dominelli sees mobilization of people and empowerment of marginalized individuals and communities as means for promoting not only participation but ultimately environmental justice. For example helping people to organize activities to protect their environment contributes to environmental justice and wellbeing of both humans and nature. (Dominelli 2013, 437.) Besides mobilizing individuals, groups, and communities to impact their environment and current policies, social work can make efforts in lobbying for sustainable solutions, hold dialogue with policy makers and stakeholders, promote collective action, and demand integrating environmental considerations to policy making (Dominelli 2012, 122, 201–202).

Participation is an overarching theme in social work addressing both social and environmental issues to fight social exclusion (Matthies, Närhi & Ward 2001) and to build

resilience (Mason 2011, 390). Resiliency for its part enables empowerment (Peeters 2016b, 200). Resilience suggests individual, community or societal ability to cope with changes, in this context for example the consequences of climate change or environmental damage (Buckingham & Kina 2015, 819). Thus it is related to adaptability and transformability. Robert A. Case (2016) suggests community resilience being an organizing concept and providing social work with starting points such as localization, building community relationships, encouraging direct participation and building self-reliance or self-sufficiency to achieve for example water and food security, as these ensure more individual and local control over decisions affecting resources on which communities depend. Margaret Alston & Fred H. Besthorn (2012, 65) add that in resilience-building attention should be put to human rights based practices, focusing on rights to healthy environment, food, water, education, employment, infrastructure, and services, and anti-oppressive practices that focus on individual and structural disadvantages such as inequitable access to natural resources.

Also engaging in political action is part of social work engaging in environmental issues. Eco-critical approach entails that social work is politically oriented. It should criticize modern policies, address structural inequalities, and strive for change (Dominelli 2012, 195). The approach implies political roles for social workers as policy makers, advocates, and community activists empowering individuals and communities (Mason 2011, 390). Also Gray, Coates & Hetherington (2013, 8) argue that social workers have the possibility to advocate for change by engaging in political activism or community organizing. Alston & Besthorn (2012, 66) translate advocacy to working with local people to speak up about the defaults and acting as a voice of resistance, and Coates (2003, 141) as supporting alternative organisations seeking socially and environmentally sustainable practices. Political action as part of environmentally-oriented social work implies that social workers should rather bring about change than merely help people to adapt to consequences of slow environmental and social decline. Ensuring participation, building resilience, empowerment, and political action are all underlying assumptions for promoting holistic change towards an environmentally and socially sustainable society.

Another important duty of social work addressing environmental issues and sustainable development is promoting awareness. This may mean raising discussions (MacKinnon 2012, 272), educating, lobbying, or creating new information by research (Dominelli 2012, 201–202). Also translating scientific knowledge for the public to grasp increases

understanding about environmental changes and their impacts (Dominelli 2012, 104). Also here the ultimate objective is change, for example to impact individual and social practices such as consumption by creating critical awareness of environmental issues concerned (McKinnon 2012, 275). Connections between personal and societal development and environment are complex and multidimensional. Thus it is elementary to build understanding about how environment enables and impacts human wellbeing and what social impacts environmental changes have. Social workers are in a good position to also assess these impacts. For example Dominelli (2012) and Kati Närhi (2001) see assessing social impacts among the foci of green or eco-social social work practice. The social impact assessment framework is presented as a concrete tool for local eco-social work, complementing environmental impact assessment, the goal being incorporating social issues in local planning and decision-making (Raymaekers 2016; Närhi 2001, 57).

Also the need for social work to form coalitions with other professions is perceived as essential in ecosocial literature (Molyneux 2010, 65). Coworking with other disciplines is important in supporting communities to create sustainable ways of living (Dominelli 2012, 201–202). The transition to sustainability defined by Peeters (2016b) is an extreme example of action and change overriding the limits between professions and disciplines. Social work addressing biophysical environment, human-nature relationship, and sustainability requires operating within many dimensions of the community. Communities are not only imperative targets and companions of social work striving for fundamental societal change but working with existing communities may simply be more efficient than reaching individuals one by one (Lysack 2012, 263). Dominelli (2012, 104) sees developing environmentally sustainable local solutions with both individuals and communities as an essential feature of green social work. A recent exception to community-centered orientation of social work addressing environmental and sustainability questions is provided by Heather Boetto (2016) fabricating a framework for micro-level practice process from engagement to evaluation. She encourages social workers to consider two questions in social work with individuals or individual families: how can we promote sustainability and address impacts of environmental decline as part of practice, and how to incorporate natural environment into practice (the previous question mainly being the focus of this thesis). Assessing structural and environmental factors impacting the individual is essential. Still, group and community levels of social work need to be considered for endeavours to be effective. (Boetto 2016, 63, 65.) In spite of recognising the micro, mezzo and macro levels of action, many scholars

emphasise the significance of locality (e.g. Besthorn 2014; Dominelli 2012). For example Dominelli (2012, 195) states green social work locally and culturally specific while also maintaining a global perspective.

Molyneux (2010, 65) remarks that even though there were no clear blueprints for ecosocial practice, there were endeavours to establish new principles and values guiding social work practice. This is understandable as shared values and principles form a steady base on which to build social work with a new conception of ecology and environment, and also to gain credibility (Mason 2011, 381). Dominelli (2012, 202) defines human rights and dignity, interdependence, reciprocity, mutuality, and solidarity, social and environmental justice, cultural and biological diversity, and peace as a set of principles guiding green social work. To enact these principles and values, expanding literature on social work and environmental issues provides with new approaches and tools. Many of the concepts such as empowerment are multidimensional and would deserve an analysis not possible here. The main point is to attain understanding of the guidelines set for environmentally-oriented social work practice. The suggested roles for social workers are plentiful, for example facilitator, coordinator, community mobilizer, resource mobilizer and coordinator, negotiator, mediator, consultant, advocate, educator, trainer, cultural interpreter, psycho-social therapist, and scientific translator (Dominelli 2012, 200). As Coates (2003, 106) states, many of the roles and actions proposed are already within the repertory of social work practice, but here the ultimate motivation for work does not lie in material well-being for all, but in engaging people in doing their part to ensure well-being of the whole Earth and people as a part of it.

4 RESEARCH METHODS AND PROCESS

4.1 Research methods

The research question set for this study explores existing practices and features of social work considering environmental issues and sustainable development. Answering this question requires gathering and summarizing examples of actual social work practice. This can be done by conducting a literature review. Literature review is not only gathering information when preparing a research but a research method as itself. The function of literature review is to establish understanding on the topic by bringing together findings from multiple sources. (Kiteley & Stogdon 2014, 10.) Literature reviews come in handy in a world already full of information because they seek to summarize literature available on the topic and thus gain new understanding on the phenomenon (Aveyard 2010, 6). In this thesis, using published literature provides a means to grasp existing practices and experiences gained. As social work tradition considering environmental and sustainability issues is still quite young, a literature review enabling a wide search on the topic is a reasonable way to conduct this study. A literature review is also an executable way to gather information not only locally but from different social work settings and environments. The scope of a thesis is a limitation but I intend to capture the most common ecological, eco-social, environmental, or green practices already adopted or tried out in social work.

A systematic literature review provides a way to achieve a comprehensive glance on literature with a predefined process to apply in the study. Systematic literature reviews have increased in popularity in social and health services in recent years. They have often been applied to examine effectiveness of interventions to promote evidence-based practices by synthesising findings of available research (Saini & Shlonsky 2012; 7; Aveyard 2010, 11). Besides systematic literature reviews there are also other designs of literary reviews. If conventionally interpreting systematic literature review as a method taking into account only quantitative or statistical studies, an integrative approach to literature reviews has enabled combining both quantitative and qualitative studies in the review to increase understanding of a phenomenon (Whittemore & Knafel 2005, 546–547). Qualitative studies have easily been excluded from systematic literature reviews because of the perceived difficulty to summarize their findings especially when looking for evidence for practice. However, including

qualitative research could provide with deeper understanding of the phenomenon. (Saini & Shlonsky 2012, 8–10, 15.)

Even though Robin Whitemore & Kathleen Knafl (2005) present systematic and integrative literature reviews as separate methods, in social studies systematic reviews can include a variety of material and studies conducted with differing methods. The type of literature relevant to a review is determined by the research question. (Aveyard 2010, 43, 57.) Systematic literature review enables both recognising the particular type and context of each piece of literature but also comparing them with other similar information and research in a systematic manner (previous, 5–6, 10). There are different methods of systematic literature reviews, even when using qualitative material. These can be differentiated by whether they are applied to aggregate data, integrate findings, or to find new interpretations of the data. The ultimate purpose of all these approaches is to gather findings from especially qualitative studies to gain new insight into the phenomenon studied. (Saini & Shlonsky 2012, 27–29.)

This study is a combination of both integrative and systematic approaches, utilizing the precise blueprints of a systematic review. A systematic literature review method provides established, defined, and commonly approved guidelines to conduct an integrative review. Systematic literature review is a method requiring extreme transparency, a comprehensive search strategy, and a detailed criteria for selecting the literature to include in analysis (Aveyard 2010, 20). A systematic review should be repeatable and thus the process transparent and documented in detail. The stages of the process are (adapted from Aveyard 2010):

- (1) Defining research question / questions for the review
- (2) Defining search strategy and inclusion and exclusion criteria
- (3) Conducting search and identifying relevant material
- (4) Assessing quality of material and critically appraising literature
- (5) Summarizing data
- (6) Interpreting and discussing findings

After (1) forming a research question to be answered by conducting a systematic literature review, the next step is (2) to develop a systematic and comprehensive search strategy (Aveyard 2010, 68). A systematic approach to search is necessary to retrieve all the relevant information to answer the research question (previous, 13; Saini & Shlonsky 2012, 93) and also to avoid cherry-picking to prove a certain point (Aveyard 2010, 10). As noted before,

in social sciences the relevant types of literature may be various, including primary research reports, books, discussion articles, and other published information, depending on the specific research question (Aveyard 2010, 20). Search strategy consists of developing search terms, selecting relevant databases, using controlled vocabulary of indexing terms of databases, and possibly some other strategies like footnote chasing, checking reference lists, hand searching relevant journals, searching gray literature, or contacting authors directly (previous, 74; Saini & Shlonsky 2012, 96, 101).

Systematic reviews require also (3) specifying a transparent set of inclusion and exclusion criteria to ensure relevancy and quality of data (Saini & Shlonsky 2012, 80). The preliminary selection of data is conducted using this criteria. Scientific quality of the data is pivotal to a systematic literature review and thus using peer-reviewed articles is preferred. Though it is a relatively easy way to ensure scientific standard of data one needs to recognize that it may not be possible to achieve complete coverage of literature if solely refereed articles are included in the review. (Kiteley & Stogdon 2014, 14.) It is also possible to search for all relevant sources and to critically assess the quality of data and explicate it in the study. Recognising the history that systematic reviews are most commonly applied to provide evidence for practice, it is understandable that using context-bound qualitative research requires thorough examination of the material from the quality perspective (Saini & Shlonsky 2012, 68). The balance between ensuring quality and comprehensiveness needs to be resolved according to the specific research question. This means reflecting on what kind of data is necessary to answer the research question and examining the quality of this as systematically and reliably as possible.

(4) Critical appraisal of data is a very important stage of a systematic literature review. Critical appraisal is a structured process of examining a piece of research in order to determine its strengths and limitations, and therefore the weight it should have in your literature review. First, you need to identify the type of literature you have. Second, you need to gather relevant information of every single data unit. Data extraction is a crucial part of a systematic literature review to both critically appraise and to summarize the data found. (Aveyard 2010, 91–96.) Helen Aveyard (2010, 120) suggests writing a short paragraph summarizing the aim of the study, the methods applied and the main findings, followed by strengths and weaknesses of the paper and consideration if the conclusions seem convincing. Michael Saini & Aron Shlonsky (2012) argue for a more thorough examination of various

approaches and differing contexts in qualitative research included as well as more detailed data extraction. Information to be extracted from every piece should include: 1. the source 2. date of publication 3. location of the study 4. setting of the study 5. purpose of the study 6. theoretical orientation 7. sampling procedures 8. sample size 9. method for data collection 10. methods for data analysis 11. strengths of the study 12. limitations of the study and 13. major findings (Saini & Shlonsky 2012, 106). Data extraction serves not only the appraisal of data but answering the research question also. Thus the aims and methods of data extraction also depend on the research question.

There are several different methods and critical appraisal tools to help with assessing quality of data, especially to assess how the studies are conducted (Aveyard 2010, 97; Saini & Shlonsky 2012, 113). A less strict appraisal method is sometimes justifiable especially if the purpose of the review is not to provide evidence for practice (Saini & Shlonsky, 15–16). The data may also include other types of literature than qualitative or quantitative studies. Gill Hek and Helen Langton suggest the following quite simplistic criteria for appraisal of nonresearch articles: Is the subject relevant to the review question? Is the report accurate? Is it well written and credible? Is it peer-reviewed in any way? Does it ring true? In what quality of journal is the article published? (Hek & Langton 2000, 51.) Whatever the assessment method or criteria, it is not necessary to abandon data units of weaker quality but to carefully assess and report the strengths and limitations of data. For example transferability of studies, interventions, and their results may well be an issue to consider. (Saini & Shlonsky 2012, 136–137.)

Appraising the data is followed by (4) summarizing the data and finally (5) interpreting and discussing the findings. The aim of data analysis in a literature review is “to bring together the different studies or other pieces of information and to find new meaning from the sum of these papers viewed as a whole than could be obtained by reading each one individually” (Aveyard 2010, 124). The first step is to summarize the content of all the data units: descriptions of studies or other literature and their strengths and limitations. This results in overall description of material included in the review. (Previous, 128.) After this, there are several methods to analyse and interpret data in literature reviews. Following the suggestions of Saini and Shlonsky (2012, 27–29) and Aveyard (2010, 129–131) I apply content analysis resulting in a descriptive delineation of findings.

There are different ways of conducting content analysis. Coding enables organizing texts in the data and exploring patterns within to answer the research questions, and also provides a defined procedure to do this (Auerbach & Silverstein 2003, 31). The central idea of coding is to move from raw text to research concerns by first making the text manageable, then exploring repeating ideas and theoretical constructs, and finally building a coherent story out of these to answer the research questions. (Previous, 31–35.) The first phase, extracting the relevant text from all data is a filtering process in which you choose the parts of text to analyse. Relevant text is text related to specific research concerns. The second phase is organising the relevant text into repeating ideas and then organising these repeating ideas into more general themes. A repeating idea is a group of codes formed by grouping together related passages of relevant text. A theme is an implicit topic that coherently organizes a group of repeating ideas. The final phase is developing theoretical constructs by grouping themes into more abstract concepts often derived from the theoretical framework applied. These theoretical constructs help creating a theoretical narrative retelling the story of data addressing your research concerns or questions. (Previous, 37–38, 43.) Aveyard suggests that results of the literature review are simply the themes discovered. Themes enable development of theoretical constructs on the basis of these results. (Aveyard 2010, 129–131, 134.) In this study content analysis conducted by coding results in themes describing practices and features of social work considering environmental issues and sustainable development.

4.2 Ethical implications

There are of course some ethical implications to consider. These concern the material, methods, and process applied, and also the presuppositions behind this study. Research permissions are not needed because of utilizing already published literature. However, using material produced by others basically means reinterpreting this material without the consent of original authors. I do my best to respect and transmit the purpose and idea of the original texts. Also the references provide readers with an opportunity to read up on the original sources. As the results of this study are available for social work students, social workers, and others interested in the subject, and as they may be applied in practice, quality of the results is important. This I pursue with explicit methods of the study and appraised quality of the data.

The most prominent presuppositions behind this study are that biophysical environment and environmental issues should be considered important in social work and that social work should strive for protecting the environment and promoting sustainable development. In this study not much attention is given to justifying environmental issues and sustainability as questions relevant to social work because of the presupposition that nature has intrinsic value. Ecocentrism, finding ultimate value in the natural world, sees ecosphere and all life having value of their own, not only as a living environment and a source for humankind (Curry 2011, 57–58). However, it needs to be acknowledged that environmentally-friendly is not automatically ethical. In social work it does not suffice that a solution is environmentally sustainable, but it needs to be socially sustainable and just also. On the other hand, for example Muldoon (2006) insists that environmental preservation is the ultimate prerequisite for human survival, and thus working for environmental protection translates into protecting the humankind also.

4.3 Research process

Documentation of the review process is essential to achieve transparency crucial to a systematic literature review. It needs to be demonstrated that the review is conducted in a systematic and comprehensive manner (Aveyard 2010, 19). I recount the research process in reference to the systematic literature review process depicted before (p. 24). The research question (1) rose from both my own interest in environmental issues and sustainable development and social work literature calling for practical examples of social work considering these. A systematic literature review seemed an applicable method to gain a comprehensive look on literature depicting environmentally-oriented social work and to result in a description of these practices.

Developing a search strategy (2) meant first determining relevant literature on the subject and then developing a detailed plan how to retrieve it. This task was made easier by the reality that environmental issues have been current in social work discussions mainly in the last couple of decades. Also because the published literature has mostly been theoretical (Molyneux 2010), the volume of data should not end up being too vast to handle. Searching electronic databases provided a way to go through large amounts of literature in a systematic way. Focusing on finding articles on the subject seemed the most practical way to both get

my hands on current proceedings in social work and also to ensure the quality of data by looking especially for articles published in refereed journals. Even though so called grey literature that is not published, such as unpublished studies, non-academic journals, and policy documents could cover recent social work endeavours, the problem is that they are rarely peer-reviewed or indexed in databases which makes them hard to find and examine in a limited scope of an undergraduate study (Aveyard 2010, 73). To select the relevant, best-possible-quality social work literature, I specified the following inclusion and exclusion criteria (3) of literature in the review.

Included literature:

- literature describing social work practice considering environmental issues and sustainability
- literature describing concrete action that has taken place
- published in 1990–
- published in English
- peer-reviewed in case of journal articles

Excluded literature:

- literature that does not clearly state that it describes social work action
- published in 1989 or before
- published in other languages than English

I also defined relevant keywords or search terms derived from the subject of this study. The keywords are social work combined with the following: eco-social, ecosocial, ecological, environment, environmental, nature, green, and sustainable development. The phrases including person in environment or human in environment were intentionally left out as the main interest was to explore social work literature dealing with biophysical environment. As narrowing down the keywords proved to be difficult without taking the risk of missing relevant results, I utilized guidance provided by Jyväskylä University Library to combine these keywords into the following search phrase: "social work" AND eco-social OR ecosocial OR ecological OR environment* OR green OR conservation OR sustainab* OR "sustainable development". As using the controlled vocabularies of databases often including only terms such as social work, sustainable development, and environment usually resulted in a large amount of results, I preferred using the complete search phrase.

I conducted the search in June 2016 in most common databases in social work scientific literature: Social Services Abstracts (ProQuest), Sociological Abstracts (ProQuest), Applied

Social Sciences Index and Abstracts (ProQuest), Social Sciences Citation Index (Web of Science), Social Care Online, Scopus, and Google Scholar. As these databases usually provided an advanced search alternative it was possible to apply the inclusion and exclusion criteria already in the search. I used the advanced search of databases to retain literature published in English, 1990 onwards, peer-reviewed, and under the topic of social work. However, as the search definition possibilities were a little different in each database, I also recorded the searches in a table:

Table 1 Search databases, results and attributes

Database	Search attributes
Social Services Abstracts (ProQuest)	<ul style="list-style-type: none"> - 814 results - advanced search: subject social work; peer-reviewed; 1990-; English; scholarly journal articles, dissertations
Sociological Abstracts (ProQuest)	<ul style="list-style-type: none"> - 397 results - advanced search; subject social work; peer-reviewed; 1990-; English; scholarly journal articles, dissertations, books
Applied Social Sciences Index (ProQuest)	<ul style="list-style-type: none"> - 137 results - advanced search: subject social work; peer-reviewed; 1990-; English
Social Sciences Citation Index (Web of Science)	<ul style="list-style-type: none"> - 1064 results - advanced search; category social work; 1990-; English; articles; all search words as topic
Social Care Online	<ul style="list-style-type: none"> - 198 results - subject terms include social work
Scopus	<ul style="list-style-type: none"> - 812 results - social sciences & humanities; social sciences; social work keyword; 1990-; English
Google Scholar	<ul style="list-style-type: none"> - 397 results - 1990-; English; social work needs to appear in the text plus at least one of the other terms

Preliminary data was chosen from these results by reading the abstracts of articles resulted by the search. By reading the abstracts I attempted to select articles relevant to the subject and to conclude whether concrete social work action was described in the article. I ended up with a preliminary data of 66 articles. After reading the full articles and applying the inclusion criteria I had 21 articles describing concrete social work practices addressing environmental issues and sustainable development, and published in refereed journals.

To ensure that all relevant literature is retrieved I also applied some additional methods of searching. As I was mainly interested in published and preferably peer-reviewed material, I attempted to locate special scientific journal issues on social work and environmental issues, finding four: *Social Work Education* 34 (5), *Contemporary Rural Social Work* 7 (1), *International Journal of Social Welfare* 21 (3), and *Critical Social Work* 4 (1). The relevant articles from these issues were already retrieved via electronic databases. Also when I got acquainted with the subject beforehand by reading recently published social work books on the subject I noted that some of these books (McKinnon & Alston 2016; Hessle 2014; Gray et al. 2013) contained articles providing practice examples of environmentally-oriented social work. As these were indeed relevant to my research question, I included these articles in the data. The total number of articles included in the data was eventually 29 articles.

It is important to take note of the strengths and limitations of the search strategy applied. A significant deficiency is that only literature published in English is included in the data. Even though most of the literature published on the subject is in English, there are discussions and literature published for example in German, Spanish, and Finnish. Due to this linguistic restriction some geographical areas may also be underrepresented in the data. Searching the electronic databases seemed to produce relevant results but among them were also results on psychology, health promotion, and social work considering social environment only. Using abstracts to sort out preliminary data from search results presents a risk of not obtaining all relevant data as abstracts may not provide enough information for determining relevancy (Aveyard 2010, 84). Even after reading full articles it was not always easy to determine if the text was describing existing social work practice or presenting suggestions. It is likely that there are some relevant articles not included in this study because of misinterpretation or not reaching all relevant material in the first place. However, including articles from recently published books on the subject adds to comprehensiveness of the data. Molyneux (2010) did not recognise strong practical implications in ecosocial literature published before

this decade. Apart from the articles published in books, this study does not include literature that does not show up in database searches. Saini and Shlonsky (2012, 102) suggest that gray literature, even unpublished, should be searched to retrieve all relevant literature in a systematic literature review, but this is beyond the resources and scope of an undergraduate study (Aveyard 2010, 73).

Having the final data, I proceeded to (4) further examine and appraise it. I started summarizing the data by extracting following information from each article: reference information, type and purpose of article, research methods applied, and description of social work action. This information is assembled in annex 1. Extraction framework was modified from the frameworks provided by Aveyard (2010, 120, 128–129) and Saini & Shlonsky (2012, 106). Modification was justifiable as the focus of this review is on social work activity, not the findings of studies. As I intended to analyse social work depicted in the articles, I considered it reasonable to provide readers also with short descriptions of social work efforts in the each article.

I also critically appraised the strengths and weaknesses of each article. I adopted the criteria suggested by Hek & Langton (2000, 51), tweaking it a little to suit my study: Is the subject - and in my case content - relevant to the review question? Is the article peer-reviewed or its quality ensured otherwise? Is it credible when describing the research methods and social work efforts? The focus of appraisal was to ensure quality, relevancy, and credibility of the data. A meticulous assessment of research procedures of each study was not necessary as I did not intend to use the findings as evidence for practice. However, the quality of data is essential to produce a decent systematic review. I was mostly able to include only peer-reviewed articles in search results. I also checked the referee-status of all included journals afterwards. The results of appraisal of each article are summarized in annex 1. After inspecting each article, an overall description of the data was assembled by seeking categorizations of articles by publication, aim of the study, year of publication, and location (country) of social work action. Both individual and overall descriptions of articles are presented in chapter 5.

After extracting information from each article and critically appraising the data I proceeded to analyse the data by content analysis (5). The content analysis was conducted by coding method applying the guidance provided by Aveyard (2010, 130–131) and Carl Auerbach &

Louise B. Silverstein (2003). I employed a four-step coding procedure: relevant texts were extracted from articles, codes were identified within relevant texts, listed and clustered into groups of repeating ideas. These repeating ideas were then grouped into more general themes. Borrowing the metaphor used by Auerbach and Silverstein (2003, 35) this was like climbing up a ladder, proceeding one step at a time from raw texts to themes describing the phenomenon and finally, in conclusions, enabling comparison of the results of analysis and the outlines provided by theoretical literature.

First, I extracted the relevant texts from the articles (Auerbach & Silverstein 2003, 37). In this case, I collected descriptions of social work action addressing environmental issues and sustainability. These were for example case examples included in the articles, case studies, and descriptions of action taken by social workers and social work organisations. I ended up with a raw text consisting of descriptions of concrete social work action, numbered by articles, and totaling up to 20 pages. I searched this raw text for codes or phrases depicting what social workers or social work organisations do or have done. After tagging these in texts by hand I listed the codes in a separate file, retaining article identification with every code. The next phase was to group codes embodying similar social work action (Auerbach & Silverstein 2003, 59–60). I took the first code on the list and identified and removed from the list the codes describing similar action. These removed codes formed the first group of codes. Then I took the second code and repeated the identification and removal process again. In this manner I went through the whole list. This method of grouping was adapted from Auerbach & Silverstein's method of constructing themes (2003, 63). It was applied already in defining repeating ideas, as similar words or expressions were not always used to depict similar action in the texts. This stage resulted in 27 groups of codes or repeating ideas (Auerbach & Silverstein 2003, 37), each embodying one type of social work action.

From the list of 27 repeating ideas, I identified the ones having something in common via a similar process as in grouping codes into repeating ideas. These groupings constructed themes, implicit topics depicting and organizing a group of repeating ideas (Auerbach & Silverstein 2003, 38, 59–60). I re-examined these themes seeking for similarities or overlaps and reconstructing categories as coherent as possible. The final themes are presented in chapter 6. There remained some overlapping between themes which I also point out in the results. The repeating idea of assessing community needs and impacts did not fit in any of

the themes but was not deleted (as suggested by previous, 64–65) but retained as a theme as itself because it was a repeating idea too common to be dismissed. I ended up with 10 themes, each embodying one approach in practice of social work in the data. Other interpretations and categorizations of collected codes are of course possible. The themes accompanied with the repeating ideas and codes included are presented in their entirety in chapter 6. This enables readers to judge if my interpretations are supported by the data and if other interpretations are reasonable (Auerbach & Silverstein 2003, 32).

I also needed to examine the data to answer the second aspect of my research question exploring features of environmental social work. After tagging codes and forming themes I reread the raw text looking for agents and contexts of social work described. This second analysis resulted in the description of distinctive features of environmentally-oriented social work, reported in chapter 6.

The results are in essence descriptive due to the research question. Usually in literature reviews the analysis is inductive and codes and themes derived from the data. In this study I wanted to provide an introduction to the approaches to environment in social work and to practices suggested by theoretical literature, assuming these may have composed a vision for environmentally-oriented social work efforts executed. As I thus had some preconceptions on the phenomenon I cannot determine this study to be purely inductive. I also compare the results of analysis, even though superficially, to suggested social work practices in theoretical literature on the subject which adds to deductive elements of this study.

5 DESCRIPTION AND CRITICAL APPRAISAL OF DATA

The first phase of summarizing data should result in a short description of each piece of literature and an overall description of data. Critical appraisal of literature is a relevant element of description. (Aveyard 2010, 128–129.) I start by summarizing each article in an alphabetical order, supplying the type and aim of the paper and a short assessment of its strengths and weaknesses. After describing each article I consider the characteristics and overall quality of the data. The articles included in the data are listed in annex 1 but not included in the bibliography unless they are used as a reference.

5.1 Description of articles

In their study applying qualitative methods Govindasamy Agoramoorthy and Minna J. Hsu (2015) illustrate irrigation-based social work implemented in states of Gujarat and Rajasthan in India and its impacts. The purpose of the article is to demonstrate how social work can be employed to develop community irrigation to enhance agriculture and improve the livelihoods of farming families in the drylands. The article is peer-reviewed and relevant to subject and the research process and social work efforts are credibly depicted. In their previous article Agoramoorthy & Hsu (2008) depict the same endeavours, focusing especially on establishing water management cooperatives. They employ both qualitative and quantitative methods to detect impacts of these efforts. This article is also peer-reviewed and relevant to subject, but compared to article published in 2015 it presents preliminary data and results. Agoramoorthy, Sunita Chaudhary, and Hsu (2009) have published yet another article on the same subject analysing statistical data and case studies to capture the impacts of development of water harvesting structures and water management through community-run cooperatives. Also this article is peer-reviewed, relevant to subject, and credible. Referring to the articles above it should be noted that the results gained have required decades of work and that the work depicted differs from Western understanding of social work. This difference is reflected in other articles also (e.g. Ranta-Tyrkkö & Das 2016; Lombard & Twikirize 2014).

Sahar Al-Makhamreh, Hana Alnabulsi, and Hana Asfour (2016) describe a mixed-methods study on a novel field training for social work students, discussing the significance of a

students' self-directed approach in investigating the relationship of natural environment and social work practice. The article is peer-reviewed and the research methods explicitly depicted. Because of the detailed description of efforts to capture the community impacts of a synchrotron-light project I consider the paper relevant, even though the efforts are conducted by social work students and though the article mainly focuses on education. Also Heather Boetto and Karen Bell (2015) report on a qualitative study of social work education examining the impacts of an online programme for Australian social work students and considering the role of social work education as a vehicle for students to become informed and active global citizens with regard to environmental sustainability. The article is peer-reviewed, the study process meticulously depicted, and its limitations acknowledged. Relevancy to the subject can be questioned as the article explores mostly attitudes and environmental knowledge of students from the viewpoint of education.

Jennifer Borrell, Sharon Lane, and Sue Fraser (2010) describe an Australian domestic energy auditing program that combines social support, empowerment, financial counselling, and energy abatement expertise, considering this as a tool for social work. The article is peer-reviewed and relevant to subject but does not clearly state in what aspects of domestic energy auditing social work is currently involved. Terry E. Carrilio (2007) presents a case study of development in the small town of Loreto, Mexico. He introduces person-in-environment perspective to a community-needs assessment project, his purpose being to illustrate ways that social work perspective can contribute to efforts to address sustainability and development. The article is peer-reviewed and the research methods documented. However, relevancy of the paper is questionable as the emphasis is on introducing social aspects to traditionally economic and environmental assessment. In their article Muammer Cetingok and Mary E. Rogge (2001) describe environmental efforts of Turkish Southeast Anatolia Project GAP to improve natural and agriculture resources, land use management, tourism, and industry. They explore how environmental justice principles are taken note of in the project and suggest roles for social work in development projects similar to GAP. The article is peer-reviewed and relevant to subject. However, possible research methods were not expressed and it was difficult to tell apart the existing and suggested roles for social work.

Lena Dominelli (2011) presents two case studies from Argentina and England, arguing that social work has an important role in raising awareness of climate change, building resilience, and helping people to cope with consequences of natural disasters. The article is peer-

reviewed, relevant to subject, and credible, and the case studies clearly separated from suggested duties for social work. Arielle Dylan (2015) describes a social work course developed and taught by her in St. Thomas University, Canada to promote development of environmental social work practice and social and environmental justice. The article is peer-reviewed, relevant, and credible, providing an account of students applying environmental theories to current issues. Robin L. Ersing, Jesse Sey Ayivor, Osman Alhassan, and Kiki Caruson (2016) present a transformative social work strategy created in a participatory action research project conducted with women of Sabon Zongo in Ghana to explore strengths and vulnerabilities of women preparing for and recovering from a natural disaster. The article is peer-reviewed, relevant as it relates to disaster mitigation strategies besides disaster relief, and credible, describing both the research process and the social work efforts in the community. Simon Evans, Sarah Hills, and Judy Orme (2012) report on a qualitative research project conducted in England and Wales describing initiatives developed within adult social care to respond to financial scarcity, climate change, and the growing elderly population. The article is peer-reviewed, relevant to subject, and credible, describing research methods and social work efforts in detail.

In her autobiographical article Mary Lane (1997) explores developments in social and political theory and their implications for social work practice, especially community work and green social work. She recounts her own experiences as a community worker in Australia. The article is peer-reviewed, relevant to subject, and credible, even though description of environmentally-oriented social work practice is short and rough. Antoinette Lombard and Janestic M. Twikirize (2014) investigate how social workers in South Africa and Uganda enact development social work and social work as a human rights profession to promote social and economic equality. The article is peer-reviewed and credible when it comes to describing research methods and social work efforts. Even though environmental work plays only a subsidiary role on described social work practice, environmental justice and sustainable development are perceived crucial in the efforts depicted. Thus the article is considered relevant to this study. Emma T. Lucas-Darby (2011) examines integration of environmental themes in social work education in the United States by describing a community practice course with greening as a theme. The article is peer-reviewed, relevant to subject, and credible, illustrating student-led green projects with local communities.

Mishka Lysack (2015) presents a case study of a policy-influencing alliance of health and environmental NGOs to reduce use of coal in Alberta, Canada. She explores the role of social work and effective strategies in promoting policy change for phasing out coal. The article is peer-reviewed, relevant to subject, and credible, even though network efforts are more interdisciplinary than purely social work activity. Christine Marlow and Colin Van Rooyen (2001) report on a survey study that examined if and how 113 social workers in New Mexico, United States and KwaZulu Natal, South Africa incorporate environmental or green issues into practice. The article is peer-reviewed, relevant to subject, and credible, describing the research methods and limitations of the study and efforts of the social workers. Jennifer McKinnon (2013) reports on a qualitative study of 20 Australian environmentally-conscious social workers to study the relevance of environment to social work practice and to explore factors that enable or constrain social workers to integrate environmental values and issues in practice. The article is peer-reviewed and relevant to subject and the research methods are documented. However, as the results of the study bring forth obstacles to enact environmental values and issues in social work there are only a few concrete examples of integrating these in practice. Pius Mutuku Mutie (2014) explores features of and players in water industry in Kenya, arguing for larger roles for social work in water security, supply, and management. The article is descriptive and relevant to subject but provides only a short reference to existing social work roles in water sector and no concrete or recognisable case examples.

Christine Lynn Norton, Barbara Holguin, and Jarid Manos (2013) describe a case study of an environmentally-based pilot initiative in Houston, Texas, providing an example of grassroots action having both social and environmental objectives. The initiative is developed by local restoration council, corrections system, shelter, and congregation. It revolves around engaging formerly incarcerated young adults in restoration of Houston prairies, bayous, and wetlands. The article is relevant to subject and credible, describing social work efforts as part of cooperative initiative and acknowledging also deficiencies of the initiative. Dawn Philip and Michael Reisch (2015) analyze the emergence of environmental justice movement in the United States and present a case study of a local environmental justice effort to demonstrate how social workers can use their knowledge and skills to make important contributions in advancing policy reforms, public education campaigns, and community organizing. The article is peer-reviewed, relevant to subject, and credible when depicting research methods and social work efforts. Komalsingh Rambaree

(2013) uses the eco-critical social work approach in analysing a set of qualitative data collected in Mauritius. He explores the concepts of control, power, and exploitation and considers corresponding areas of eco-critical social work: antioppressive practice, promotion of social justice, and promotion of critical thinking. The article is peer-reviewed, relevant to subject, and credible, describing research methods and social workers' roles in Mauritius. However, the conceptualisations and roles of eco-critical social work come across rather as suggested than as existing social work practices. In their article Satu Ranta-Tyrkkö & Arpita Das (2016) provide an overview of social work in India and present two case examples to argue for social work involvement in environmental issues and in responding to local needs of marginalised people. The article is relevant to subject and credible, providing case examples. Mary E. Rogge, Kimberly Davis, Deborah Maddox, and Milton Jackson (2006) explore how environmental problems serve as a rallying cause for economic development and empowerment for local people. The article describes a community-university partnered case study of neighbourhood-based resilience and action to promote environmental cleanup and to reverse economic oppression in Chattanooga, Tennessee. The article is peer-reviewed, relevant to subject, and credible, describing research methods and social work efforts, even though the latter are mostly limited to research and supporting local action.

Dyann Ross (2013) examines in her case study how social workers have engaged in a struggle between a mining company and neighbouring communities and promote corporate responsibility, social justice, and sustainability. The article is relevant and credible, recounting social work efforts and both wins and defeats during the process. Benjamin Shepard (2013) presents a case study of a campaign to save green spaces in New York City where local groups have built a coalition to defend community gardens. The article provides an example of innovative approach utilizing principles and techniques of community action. The article is relevant and credible, even though the author defines himself as well a researcher, a practitioner, and an activist and actual social work approaches in the campaign remain undefined. Daniela Stehlik (2013) presents a qualitative study on how environment might be considered in social work practice and how crisis such as drought influences social work delivery. The author draws on the experiences of Drought Review Taskforce's Expert Social Panel, recounting also experiences of a social worker. The article is relevant and credible but describes social work practice quite shortly, concentrating on exploring the impacts of environmental changes and policies. Joke Vandenabeele, Katrien van Poeck, and

Jef Peeters (2016) examine community building and social learning in transforming society, exploring also new ways of conceptualizing citizenship, democracy, and participation and how these relate to social work addressing sustainability issues. The article is relevant and credible, providing three case examples of social work engaging people in efforts towards a sustainable society in Belgium. The analysis draws on these case examples even though the research methods are not explicitly defined. Bret Alan Weber (2012) recounts an ethnographic account of a social worker's endeavour to create a local Energy Alliance, which was also an effort to engage social work in development of green economy. The local Energy Alliance was initiated to help moderate-income residents reduce energy costs and carbon output in a northern plains community in the United States. The article is peer-reviewed, relevant to subject, and credible when describing social work efforts and roles during the process.

5.2 Summarization of data

The data of this study consists of 29 articles published either in a peer-reviewed social work journal or as an article in an edited book discussing ecological or environmental social work. Journals from which articles are derived are *International Social Work* (Agoramoorthy & Hsu 2015 & 2008; Boetto & Bell 2015; Lysack 2015; Lombard & Twikirize 2014; Carrilio 2007; Marlow & Van Rooyen 2001), *Australian Social Work* (McKinnon 2013; Rambaree 2013; Borrell et al. 2010), *British Journal of Social Work* (Al-Makhamreh et al. 2016; Evans et al. 2012; Lane 1997), and *Advances in Social Work* (Weber 2012; Lucas-Darby 2011). Single articles were included in *Asia Pacific Journal of Social Work and Development* (Agoramoorthy et al. 2009), *Social Development Issues* (Cetingok & Rogge 2001), *International Journal of Social Welfare* (Dominelli 2011), *Contemporary Rural Social Work* (Dylan 2015), *Social Work Education* (Philip & Reisch 2015), and *Journal of Community Practice* (Rogge et al. 2006). Book chapters included in the data were published in *Ecological Social Work: Towards Sustainability* (Alston & McKinnon 2016), *Environmental Change and Sustainable Social Development: Social Work-Social Development Volume II* (Hessle 2014), and *Environmental Social Work* (Gray, Coates & Hetherington 2013).

Most of the articles aimed among other things at investigating how social work can be employed in environmental and sustainability efforts or how these can be addressed in social

work practice (Agoramoorthy & Hsu 2015; Lysack 2015; Philip & Reisch 2015; Lombard & Twikirize 2014; Mutie 2014; McKinnon 2013; Rambaree 2013; Ross 2013; Stehlik 2013; Evans et al. 2012; Weber 2012; Dominelli 2011; Borrell et al. 2010; Carrilio 2007; Cetingok & Rogge 2001; Marlow & Van Rooyen 2001). Four articles dealt with embedding biophysical environment in social work education (Al-Makhamreh et al. 2016; Boetto & Bell 2015; Dylan 2015; Lucas-Darby 2011). Other aims of studies were varied, among these exploring impacts of efforts, examining environmental issues as a launching pad for community action, mapping strengths and weaknesses in disaster mitigation, discussing environmentally-oriented social work in different contexts, and providing examples of grassroots community efforts. The exploratory nature of the studies reported in the articles may be explained by expanding discussions on the subject and pressures to develop environmentally-oriented social work practices as these are not yet an established element of mainstream social work. Many of the articles in the data provided suggestions for social work practice in addition of examples of existing practices.

The years of publication vary from 1997 to 2016. The majority, 22 articles, were published in 2010 or later, eight of these as book chapters. Six articles were published between 2001 and 2009 and only one in the 1990s. Concluding from this the amount of articles published on the subject has been increasing in recent years. Social work practice examples described in these articles were located in following geographical areas:

- North America: USA (7 articles), Canada (2), Mexico (1)
- Asia: India (4), Turkey (1), Jordan (1)
- Australia (6)
- Africa: South Africa (1), Uganda (1), Ghana (1), Mauritius (1), Kenya (1)
- Europe: United Kingdom (2), Belgium (1)
- South America: Argentina (1)

Some of the articles describe partially the same efforts (Agoramoorthy & Hsu 2015 & 2008; Agoramoorthy et al. 2009) and one of the articles provides three different practice examples from the same country (Vandenabeele et al. 2016). The emphasis being on English-speaking countries may be due to inclusion of articles in English only.

The data contains both studies and descriptive literature. 14 of the studies were qualitative (Al-Makhamreh et al. 2016; Ersing et al. 2016; Boetto & Bell 2015; Lysack 2015; Philip & Reisch 2015; Lombard & Twikirize 2014; McKinnon 2013; Rambaree 2013; Ross 2013;

Shepard 2013; Stehlik 2013; Evans et al. 2012; Carrilio 2007; Rogge et al. 2006). Three studies were conducted with mixed methods (Al-Makhamreh et al. 2016; Agoramoorthy et al. 2009; Agoramoorthy & Hsu 2008) and one study was quantitative (Marlow & Van Rooyen 2001). 12 of the studies utilized case studies (Agoramoorthy & Hsu 2015; Lysack 2015; Philip & Reisch 2015; Lombard & Twikirize 2014; Ross 2013; Shepard 2013; Stehlik 2013; Dominelli 2011; Agoramoorthy et al. 2009; Agoramoorthy & Hsu 2008; Carrilio 2007; Rogge et al. 2006). In some cases, the possible method of study was not defined (Vandenabeele et al. 2016; Cetingok & Rogge 2001; Lane 1997).

The overall scientific quality of the data is decent concluding from that all of the journal articles are peer-reviewed and the rest from edited social work books scrutinized during the publication process. When it comes to relevancy of the data the quality varies. The purpose of this study is to capture existing practices and features of social work considering environmental issues and sustainable development. As Aveyard (2010, 128) suggested some of the articles, especially those providing case studies or practice examples stood out as particularly relevant due to abundant and detailed descriptions of social work activity and roles. However, the quality of data is at times compromised because actual social work efforts and mere suggestions for practice are not clearly separable. In the data there are also four articles describing social work education embracing environmental issues. Articles on social work education were well represented in the search results. Following the inclusion criteria I included the articles providing with concrete and existing examples of environmentally-oriented social work education.

6 RESULTS

6.1. Social work practices in the data

The purpose of this literature review is to capture existing practices of social work addressing environmental issues and sustainable development. This means exploring actions social workers and social work organisations dealing with these issues have taken. The results of this study describe these activities. The coding process depicted in chapter 4.3 resulted in 10 themes outlining social work in the data:

- I Developing technical infrastructure
- II Supporting natural resources management and agriculture
- III Supporting grassroots economy
- IV Environmental restoration and protection
- V Assessing community needs and impacts
- VI Increasing awareness and information
- VII Ensuring participation and empowerment
- VIII Ensuring environmental justice
- IX Accumulating and coordinating resources
- X Adopting and supporting sustainable practices at work and home

These are presented below, accompanied with the included repeating ideas and codes, and also examined in more detail. As many of these themes and activities are common to social work in general, I also analyse how the environmental approach is integrated in social work activities described. Despite the efforts to create both coherent and distinguishable categories some of the themes are somewhat overlapping, or the codes included applicable to other themes also. It was difficult to retain balance between simplicity and maintaining diversity and details. I opted for several themes instead of a few to provide with a description that is informative, enabling readers to see the possibilities of integrating environmental values and issues into social work practice.

Activities to directly improve physical environment and resources (I, II, III & IV)

Table 2 Developing technical infrastructure

I DEVELOPING TECHNICAL INFRASTRUCTURE
<p>1. DEVELOPMENT OF WATER INFRASTRUCTURES construction of rainwater harvesting structures (Ranta-Tyrkkö & Das 2016); fixing the lift irrigation (Agoramoorthy & Hsu 2015); planning and implementation of water projects (Mutie 2014); improving access to safe water (Lombard & Twikirize 2014); building community lift-irrigation schemes and check dams, recharging village wells and developing watershed (Agoramoorthy & Hsu 2008)</p> <p>2. DEVELOPMENT OF ENERGY INFRASTRUCTURES AND REDUCING ENERGY USE implementing energy alliance utilizing improved technology (Weber 2012); domestic energy audit practice combining lifestyle change advice, technical support, financial counselling, and access to grants (Vandenabeele et al. 2016; Weber 2012; Borrell et al. 2010); building rural biogas plants (Agoramoorthy & Hsu 2008); convincing housing departments and proprietors of housing to make houses more energy efficient and tenable (Vandenabeele et al. 2016)</p> <p>3. IMPROVING SANITATION improving access to sanitation and hygiene (Lombard & Twikirize 2014); building rural sanitation blocks (Agoramoorthy & Hsu 2008)</p>

The theme of developing technical infrastructure includes activities to develop water and energy infrastructures and improving sanitation. Most of the actions interpreted as developing infrastructure were related to improving access to water (Ranta-Tyrkkö & Das 2016; Agoramoorthy & Hsu 2015 & 2008; Mutie 2014; Agoramoorthy et al. 2009) or improving efficiency and sustainability of energy production and use (Weber 2012; Dominelli 2011; Borrell et al. 2010; Agoramoorthy & Hsu 2008). Social workers addressing water and energy issues promoted innovative and green technologies and sought local solutions to ensure sufficient energy and water resources without negative impacts on environment or unbearable financial costs for people. The goals are both gaining profit for individuals and communities through successful agriculture or through saving money on energy, and simultaneously promoting sustainable development. Many of the activities mentioned demand technical knowledge but, as noted later in this chapter, many efforts described in the data were cooperative and social workers accompanied by experts from other fields. In addition, social work is not necessarily conducted by professional social workers but employees or volunteers of a non-government social work organisation embodying people with different professional backgrounds.

Table 3 Supporting natural resources management and agriculture

II SUPPORTING NATURAL RESOURCES MANAGEMENT AND AGRICULTURE	
4.	IMPROVING FOREST MANAGEMENT training and capacity building of rural communities in natural resource management, afforestation (Ranta-Tyrkkö & Das 2016); saplings planting, social forestry and joint-forest management (Agoramoorthy & Hsu 2008)
5.	IMPROVING FARMING organic farming, seed development, horticultural development, improving fertility and moisture holding capacity of the soil (Ranta-Tyrkkö & Das 2016); growing seedlings and supplying these to gardens, producing vermicompost for commercial purposes, educating about starting gardens (Lombard & Twikirize 2014); horticulture (Agoramoorthy & Hsu 2008); starting community gardens (Lane 1997)
6.	SUPPORTING ANIMAL HUSBANDRY supporting animal husbandry (Ranta-Tyrkkö & Das 2016); training household groups in income-generating activities such as rearing animals and farming, establishing milk processing plant (Lombard & Twikirize 2014)

This group of repeating ideas contains activities improving agriculture and natural resource management, excluding the development of technical infrastructure supporting these. Also included in this second theme are social work activities supporting animal husbandry. I wanted to bring forth natural resources management as a social work interest as it is diffused in the first two themes, here relating mostly to forest management. For example social work efforts improving water harvesting and management included in the first theme could also be interpreted as natural resource management and supporting farming through ensuring irrigation for plantations.

Table 4 Supporting grassroots economy

III SUPPORTING GRASSROOTS ECONOMY	
7.	SUPPORTING GRASSROOTS ECONOMY starting barter systems (Lane 1997); introducing complementary currency to spark involvement of the unemployed in improving green and public spaces (Vandenabeele et al. 2016)
8.	SUPPORTING EMPLOYMENT finding sustainable self-employment strategies for local people (Ranta-Tyrkkö & Das 2016); giving direct employment to farming communities (Agoramoorthy & Hsu 2015); seeking waste strategies creating jobs (Philip & Reisch 2015); employment of villagers (Agoramoorthy et al. 2009); linking environmental work to jobs (Lane 1997)

Described in the data were also activities aiming at developing grassroots economy by employment or simulating economic activities. Also the latter enabled participation of those excluded from labour market. The difference to mainstream social work efforts is that

practices described here are not only socially and economically but also environmentally sustainable, for example providing work in improving green spaces or linking jobs with advances in protecting the environment. Again there is overlapping between the first three themes to be taken note of. The social work activities described in these themes all strengthen self-sufficiency of the communities. Social work engagement in agriculture, water projects and grassroots economic activities strengthen self-sufficiency of communities when it comes to resources such as water, food, energy and employment, without the need to deplete local environment.

Table 5 Environmental restoration and protection

IV ENVIRONMENTAL RESTORATION AND PROTECTION
<p>9. ENVIRONMENTAL RESTORATION AND CLEANUP engaging formerly incarcerated young adults in nature restoration work (Norton et al. 2013); improving a school's environment by clearing spaces and planting fresh trees and shrubbery (Lucas-Darby 2011); cleaning up the environment (Marlow & Van Rooyen 2001)</p> <p>10. REDUCING WASTE exploring zero-waste strategies (Philip & Reisch 2015); working with residents and local government to reduce dog litter (Lucas-Darby 2011)</p>

In the data there were a few examples of environmental cleanup or restoration efforts conducted by social workers. When social workers were engaging people in these efforts, the rehabilitative aspect was conceived as important as the resulting improvement in local environment (e.g. Norton et al. 2012). Reducing waste was among the rare activities clearly related to environmental protection. The example of Philip & Reisch (2015) was ultimately an effort to reduce the need for a waste-to-energy incinerator seen as a threat for local environment.

Activities related to social organisation and resources (V, VI, VII, VIII & IX)

Table 6 Assessing community needs and impacts

V ASSESSING COMMUNITY NEEDS AND IMPACTS
<p>11. ASSESSING COMMUNITY NEEDS AND IMPACTS exploring strengths, vulnerabilities, and social networks of women in preparing for and recovering from a disaster (Ersing et al. 2016); discussing with community members and getting to know their needs (Agoramoorthy & Hsu 2015); local community assessment seeking to understand the views on environmental and social impacts of a synchrotron-light project (Al-Makhamreh et al. 2016); assessing impacts of droughts on families and communities (Stehlik 2013); identifying problems via public and individual meetings (Dominelli 2011); working with communities to identify green projects (Lucas-Darby 2011); translating the human implications of data in an environmental community-needs assessment project (Carrilio 2007); personal and situational assessment (Borrell et al. 2010)</p>

In the data assessment was related to both needs of the individuals, families, or communities and social impacts of environmental changes. In many cases the means or even the aims of intervention were only vaguely defined beforehand and it was social work responsibility to negotiate the issues to address and the means to do this. There were also examples where assessment was the main duty of social work, especially when exploring social impacts of recent development (Al-Makhamreh et al. 2016; Carrilio 2007). Social work professionals were for example incorporated in multidisciplinary working groups as experts revealing or forecasting social impacts of environmental development.

Assessment of needs and social impacts is common to social work practice. In the data assessment was applied to bring forth needs and impacts that relate to local environment or environmental changes. This kind of assessment answers to questions such as: What kind of environmental or green efforts would be most useful to the community? What needs do people have in preparing for environmental changes or addressing environmental issues? What kinds of impacts do environmental issues or changes have on people and the communities?

Table 7 Increasing awareness and information

VI INCREASING AWARENESS AND INFORMATION
<p>12. RAISING AWARENESS training sessions and awareness raising for residents (Vandenabeele et al. 2016); exploring effective ways to raise local population's awareness (Al-Makhamreh et al. 2016); organizing a consciousness-raising, issue-spotlighting event (Dylan 2015); deepening public awareness, organizing a public panel (Lysack 2015); raising environmental literacy, attracting media attention through marches, presentations, and rap and poetry performances (Philip & Reisch 2015); awareness creation (Mutie 2014); directing coastal inhabitants towards marine protection (Rambaree 2013); media coordination, campaigning, street theatrics, holding press conferences and releasing statements (Shepard 2013); public education and promotion (Weber 2012); raising awareness (Lucas-Darby 2011); visits, meetings, and discussions to raise awareness (Agoramoorthy et al. 2009); raising awareness by presentations in conferences (Rogge et al. 2006); educating citizens, government officials, and other stakeholders (Cetingok & Rogge 2001); talking about volunteering opportunities, educating to increase awareness of environmental issues, and lobbying (Marlow & Van Rooyen 2001)</p> <p>13. RESEARCH participatory action research (Ersing et al. 2016); feasibility study of an energy alliance (Weber 2012); documentation and research on local action (Shepard 2013; Rogge et al. 2006); research on social implications of economic and environmental development (Carrilio 2007); research on social aspects of environmental justice and policy implications and outcomes (Cetingok & Rogge 2001)</p>

Increasing awareness appeared to be one of the most common activities among social work in the data. The topics varied from recycling and local issues to climate change and environmental justice. Education is also included above as here it translates into increasing knowledge on a certain topic, not into providing skills to do something. Also research as increasing new information is included in raising awareness, following Dominelli's (2012, 201–202) example. As many of the articles in the data were depicting social work research, executing the studies resulting in these articles can also be perceived as a notable social work activity increasing knowledge on social work and the environment.

Again there is some overlapping, as many codes included above could as well be interpreted as accumulating resources (IX). Social workers use the limelight not only to spread information but also to gain more resources and allies via publicity. For example in Rogge et al. (2006) presentations were held to inform the public about the situation and efforts of local people and thus to promote their standing. Also research exploring social impacts translates into both assessment of impacts and increasing information.

Table 8 Ensuring participation and empowerment

VII ENSURING PARTICIPATION AND EMPOWERMENT	
14. ENSURING PARTICIPATION	ensuring participation of communities (Mutie 2014); ensuring people's involvement (Agoramoorthy et al 2009); enhancing participation in development projects (Cetingok & Rogge 2001); participatory action research for women (Ersing et al. 2016); ensuring participation of women (Agoramoorthy & Hsu 2015); a parallel project targeted to women (Lombard & Twikirize 2014); including marginalized communities in tackling climate change and resolving social problems (Dominelli 2011); developing cultural competence practice sensitive to gender, culture, and religion (Al-Makhamreh et al. 2016)
15. ORGANISATION AND MOBILISATION OF PEOPLE	building a small movement to stop construction of a waste-to-energy incinerator (Philip & Reisch 2015); social action and making use of direct action in community organizing, range of tactics from nonviolent civil disobedience to protests, demonstrations, and blocking streets, and social organising such as holding pleasurable events such as parties, celebrations, and meetings (Shepard 2013); planning local community action over pollution and rampant development, and assisting groups to work on issues such as unemployment, transport, urban planning, flooding, and pollution (Lane 1997)
16. ESTABLISHING PEOPLE'S INSTITUTIONS	conservation and development of village commons, empowering rural communities in self-rule, strengthening village institutions such as village committees, and establishing cooperative dairies (Ranta-Tyrkkö & Das 2016); setting up community level cooperatives (Agoramoorthy & Hsu 2015); creating lift-irrigation cooperatives, watershed associations, joint forest management cooperatives, self-help groups, and youth, womens' & farmers' groups, creating people's institutions to revive grassroots social changes (Agoramoorthy & Hsu 2008)
17. EMPOWERMENT	empowerment of community members (Agoramoorthy & Hsu 2015); community empowerment and development activities (Rambaree 2013); empowerment of household energy consumer (Borrell et al. 2010)

This theme embodies many crucial activities in social work represented in the data: ensuring participation, mobilisation and organisation of people, establishing people's institutions, and empowerment. The first group of codes embodies activities ensuring the participative basis of social work and engaging people into action. The data provides examples of both ensuring participation of people in general but also participation of marginalised groups, for example women, unemployed people, or rural peripheral communities. Also development of culturally sensitive social work practices (Al-Makhamreh et al. 2016) is included here as it increases approachability and inclusivity of social work. The second group of codes included in this theme contains activities related to social organisation and mobilisation of people. These include also activities more characteristic to political activism than conventional social work. I did not create a separate category or theme for political action because many social work roles and activities described could be conceived as political, such as advocacy,

policy making or activism (Mason 2011, 390), and also because many activities depicted by the results ultimately aim for a profound change in the community.

The third group of codes, establishing people's institutions such as cooperatives and committees, also relates to ensuring participation and empowerment of people. The distinctive feature of this subgroup is the emphasis on social work contribution to creating permanent institutions and social structures serving the community. Likewise, empowerment is related to both participation and establishment of people's institutions. The last group of codes, empowerment, is rather an artificial one, as the common nominator is the explicit use of the term empowerment. Both ensuring participation and empowerment could as well refer to activities included in other categories. For example, Agoramoorthy & Hsu (2015) refer to empowerment by developing cooperatives and improving irrigation systems and thus improving agriculture and livelihood in local villages. However, empowerment as assisting local people and communities in taking running their communities in their own hands, and thus determining their own futures, is an important task of social work depicted in the data.

These quite encompassing categories of activity this theme embodies are also common to mainstream social work and adopted to social work addressing environmental issues and sustainable development. The difference lies in the context of participation and involvement. Here people participate to tackle not only social but also environmental issues. They for example engage in village committees and cooperatives to ensure both social and environmental sustainability through fair allocation and sensible use of natural resources.

Table 9 Ensuring environmental justice

VIII ENSURING ENVIRONMENTAL JUSTICE
<p>18. ADVOCACY individual or group advocacy when energy consumption is beyond the control of residents (Borrell et al. 2010); case and class advocacy regarding to environmental risks and benefits and fair treatment (Dominelli 2011; Cetingok & Rogge 2001)</p> <p>19. MEDIATION identifying environmental justice issues, mediation regarding to fair distribution of environmental risks and benefits (Cetingok & Rogge 2001), providing solutions to disputes over irrigation water (Agoramoorthy & Hsu 2015)</p>

Advocacy was mentioned in a few articles included in the data. It referred not only to standing up for certain people or groups but also to ensuring fair treatment of different

parties. This relates to social work concerns about environmental justice as equal distribution of both risks and benefits (Cetingok & Rogge 2001). Included here is also mediation as social work activity. Assuming mediation also strives for equal allocation of both benefits and risks, advocacy and mediation together consist a coherent theme outlining social work practices to ensure environmental justice.

Table 10 Accumulating and coordinating resources

IX ACCUMULATING AND COORDINATING RESOURCES
<p>20. SEEKING INFLUENTIAL SUPPORT engaging provincial members of the legislative assembly, researching positions of political parties on pollution and health (Lysack 2015); contacting attorney general (Shepard 2013); gathering information about the political landscape and engaging local and elected officials (Weber 2012); identifying and contacting key neighbourhood leaders (Rogge et al. 2006)</p> <p>21. RAISING FUNDS raising funds (Agoramoorthy & Hsu 2015; Dylan 2015; Lucas-Darby 2011); fundraising, using trusts and benefactors to purchase land (Shepard 2013); preparing grant proposals, bringing in resources such as workshops (Rogge et al. 2006)</p> <p>22. FORMING PARTNERSHIPS AND NETWORKS inviting speakers from SESAME and local community (Al-Makhamreh et al. 2016); forming a network of NGOs and professionals (Lysack 2015); creating a team developing energy alliance, meetings with bankers, auditors, contractors and other energy alliance organisations (Weber 2012); linking local people with a foundation to employ new technology to greener energy production, bringing stakeholders together to address fuel poverty (Dominelli 2011); seeking partners to improve environment (Lucas-Darby 2011); expanding and participating in interdisciplinary, citizen, and stakeholder partnerships, and liaison (Cetingok & Rogge 2001)</p> <p>23. DIRECTING ORGANISATIONS AND NETWORKS chairing a network, network facilitating (Lysack 2015); establishing and directing an organisation (Lombard & Twikirize 2014); role of a manager (Weber 2012); policy development, implementation, monitoring, and evaluation (Cetingok & Rogge 2001)</p>

One common duty of social workers in the data was to bring together stakeholders and necessary resources, were they funds, knowledge, influential allies, or networks. Forming partnerships meant for example connecting a community with an organisation providing the necessary help to address local environmental issues (Dominelli 2011), or bringing together communities and corporations to increase common understanding on the issue when there are concerns on industrial efforts and their impacts (e.g. Al-Makhamreh et al. 2016). There were also examples of social workers establishing an organisation to address an issue or being granted a position leading a network or an organisation. The common nominator in this theme, including directing organisations and networks, is the coordinative role of social workers whether this means coordinating social or physical resources. Thus also policy

development, implementation, and evaluation (Cetingk & Rogge 2001) is included above. An important aspect worth mentioning is that the achievements presented in the data were often a result of cooperation and not even attainable to social work alone.

Table 11 Adopting and supporting sustainable practices at work and home

X ADOPTING AND SUPPORTING SUSTAINABLE PRACTICES AT WORK AND HOME
<p>24. CASEWORK AND COUNSELLING SUPPORTING ENVIRONMENTAL EFFORTS social workers providing accommodation, access to meals, case management, medical and mental health services, substance abuse counselling, and legal aid to participants of [environmental restoration] program (Norton et al. 2013); managing income-support payments, providing counselling, and operating a national call centre (Stehlik 2013); considering environment-related issues in casework (McKinnon 2013)</p> <p>25. ADOPTING SUSTAINABLE PRACTICES AT WORK restraining carbon emissions by reducing travel mileage by using new technologies and coworking in individual care, adapting environmental management and audit scheme standard, considering environmental and social implications in acquisition of services, training staff and providing guidance to ensure sustainability at work, establishing sustainability officer and a cross-authority steering group, and service co-production and increasing support networks with service users, communities, and other service providers (Evans et al. 2012); introducing recycling and waste reduction at workplace, assessing sustainability of modes of social work practice (McKinnon 2013); philosophical interpretation of human-nature relationship, recycling (Marlow & Van Rooyen 2001); employing a community worker to work on environmental issues (Lane 1997)</p> <p>26. ADAPTING TO ENVIRONMENTAL CHANGE AT WORK adaptation by ensuring that services can be delivered in spite of impacts of climate change, identifying risks to vulnerable people and service delivery, and developing an action plan (Evans et al. 2012); providing services during prolonged crises such as droughts (Stehlik 2013)</p> <p>27. MAKING CHANGES TO OWN LIFESTYLE making lifestyle changes such as recycling, commuting by bicycle, and limiting use of resources, involvement in permaculture, and taking part in environmental campaigns (McKinnon 2013)</p>

The last and the most incoherent theme rounds up various ways to introduce environmental values and efforts both at work and home. The theme embodies initiatives to incorporate environmental issues and values in the work by individual social workers interested in environmental issues (McKinnon 2013; Marlow & Van Rooyen 2001) and by whole work communities such as local community social work (Lane 1997) and adult social work (Evans et al. 2012). Strengthening the green aspect of social work meant adding resources to dealing with environmental issues but also reconsidering for example logistics, acquisition of services, and daily habits both at work and home. Not all efforts were to prevent environmental damage as included were examples of preparing for and adapting to

environment-related risks affecting both clients and social work delivery. Thus social work addressing environmental issues is related to both mitigating negative environmental development, and adapting to changes that are likely or unavoidable.

Missing from the ten themes presented above is building resiliency which was mentioned a few times in the data (Ranta-Tyrkkö & Das 2016; Philip & Reisch 2015; Dominelli 2011). Building resiliency is about helping people and communities to cope with the effects of environmental changes (Buckingham & Kina 2015, 819). The concept embodies many of the social work activities depicted in the data, but is not apt to include in any single theme depicted in this chapter.

6.2 Features of social work in the data

Social work presented in the data is manifold, differing essentially in diverse contexts. For example Lombard & Twikirize (2014, 319) present two examples, the first from South Africa where social work is regulated by law and the second from Uganda where social work is not professionally regulated or requiring qualifications even though social workers in Uganda are prominent community-level workers. Also in India university level social work and voluntary approaches exist hand-in-hand (Ranta-Tyrkkö & Das 2016, 145). Depending on the author and context, social work was called for example community social work (Dominelli 2011) or developmental social work (Lombard & Twikirize 2015). As Ranta-Tyrkkö and Das state, ecological social work is "often incorporated with work done under other labels such as community or social development or development cooperation work" (Ranta-Tyrkkö & Das 2016, 146).

Drawing upon the data there are some notable features describing this manifold and diverse social work addressing environmental issues and sustainable development. To begin with, *environmental goals are usually among other goals or sustainability appears as a directive of action in social work*. In the data environmental goals were usually accompanied with or secondary to social aims of action, for example promoting environmental justice intertwined with social justice (Philip & Reisch 2015; Cetingok & Rogge 2001), promoting the position and quality of life of disadvantaged communities (Ranta-Tyrkkö & Das 2016; Dominelli 2011), reducing energy costs for people (Weber 2012; Borrell et al. 2010), promoting

participation (Vandenabeele et al. 2016), reversing economic oppression (Rogge et al. 2006), changing distribution of power (Shepard 2013), and reducing harmful impacts of environmental problems (Lysack 2015). There were also examples of social work efforts in which sustainability was considered in planning and execution as a sort of directive even though it was not among the expressed goals (Agoramoorthy & Hsu 2015 & 2008; Lombard & Twikirize 2014; Stehlik 2013; Agoramoorthy et al. 2009). Some efforts aimed at introducing environmental goals and sustainable development also in social work (Al-Makhamreh et al 2016; Dylan 2015; Boetto & Bell 2015; Evans et al. 2012).

The second feature of ecological or environmental social work is that in practice it often translates into *community-based* work. In the data there were 16 examples of social work with communities (Al-Makhamreh et al. 2016; Ersing et al. 2016; Ranta-Tyrkkö & Das 2016; Agoramoorthy & Hsu 2015; Philip & Reisch 2015; Lombard & Twikirize 2014; Mutie 2014; Rambaree 2013; Ross 2013; Shepard 2013; Dominelli 2011; Lucas-Darby 2011; Agoramoorthy et al. 2009; Agoramoorthy & Hsu 2008; Rogge et al. 2006; Lane 1997). In four articles social work was carried out with both communities and individuals (Vandenabeele et al. 2016; McKinnon 2013; Stehlik 2013; Marlow & Van Rooyen 2001). Only two articles provided examples of casework or working with only a few selected participants (Norton et al. 2013; Borrell et al. 2010).

The third feature is that on the grounds of the data social work is *neither more rural or more urban*. In the data there were seven examples of social work in urban environments (Ersing et al. 2016; Vandenabeele et al. 2016; Lysack 2015; Philip & Reisch 2015; Norton et al. 2013; Shepard 2013; Weber 2012) and six examples of rural social work (Agoramoorthy & Hsu 2015; Dylan 2015; Lombard & Twikirize 2014; Stehlik 2013; Agoramoorthy et al. 2009; Agoramoorthy & Hsu 2008). Many of the examples were somewhere in-between, describing work executed in villages or small communities defined neither rural or urban.

As a fourth feature social work is *executed by different agents and often as a collaborative and multidisciplinary effort*. According to the data, most often social work was executed by NGOs (Ranta-Tyrkkö & Das 2016; Agoramoorthy & Hsu 2015; Lombard & Twikirize 2014; Mutie 2014; Agoramoorthy et al. 2009; Agoramoorthy & Hsu 2008) or by social work researchers, educators, or students (Al-Makhamreh et al. 2016; Ersing et al. 2016; Boetto & Bell 2015; Dylan 2015; Lucas-Darby 2011; Rogge et al. 2006). In some examples social

work addressing environmental and sustainability issues was conducted as part of public social services (Stehlik 2013; Evans et al. 2012; Dominelli 2011; Lane 1997). In some cases social workers were taking action outside the formal practice as activists or representatives of voluntary groups (Philip & Reisch 2015), or in multiple roles of social work practitioner, researcher, and activist (Shepard 2013). In many cases social workers operate in partnership with other professionals and organisations, for example engineers (Agoramoorthy & Hsu 2015), local government, school system, and a conservation group (Lucas-Darby 2011), or restoration council, corrections system, local shelter, and church (Norton et al. 2013). Social workers may also operate as part of networks consisting for example of health and social work professionals, NGOs, pediatrics, energy businesses, and lawyers (Lysack 2015), or as members of multidisciplinary audit teams or expert groups (Stehlik 2013; Borrell et al. 2010; Carrilio 2007). Also community is emphasized as a partner instead of an object or context of social work (Ersing et al. 2016; Rogge et al. 2006). The reason for collaboration and multidisciplinary may derive from the need for diverse knowledge and skills, for example social, health-related, technical, and economic to achieve the objectives of the efforts. Collaboration may also be essential to organise the necessary services and support for people participating in the activities. Versatile knowledge and skills, different approaches, and inclusive resources are indispensable when helping communities facing multiple issues: "Social development is by its very nature interdisciplinary and requires a panoramic understanding of the ways in which complex social, political, economic, cultural and environmental systems interact" (Carrilio 2007, 529).

The fifth feature of social work addressing environmental issues and sustainable development is well described by the phrase 'think global, act local'. Many of the authors highlight the importance of developing and executing *interventions based on locality*, for example utilizing intervention models specific to local community development (Al-Makhamreh et al. 2016), developing innovative systems of social care based on co-production, mutualism, and localism (Evans et al. 2012), developing solutions to local needs (Ranta-Tyrkkö & Das 2016), and reviving and updating local wisdom with what science and technology have to contribute (Ranta-Tyrkkö & Das 2016). Approach to practice emphasizes locality and participation of the community: "Whilst there is diversity in green thinking, decentralization, community and locality remain key themes. Practicing green is therefore not just taking up environmental issues; it is a way of practicing which emphasizes connection and participation." (Lane 1997, 337.) The efforts are locally and contextually

bound as there does not seem to be a one-size-fits-all solution in social work considering environmental and sustainability issues in varying contexts.

6.3 Summarization of results



Figure 1. Practices of social work addressing environmental issues and sustainable development

The figure above provides a general view on current social work practice addressing environmental issues and sustainable development according to the literature included in this literature review. The figure embodies both the themes or categorizations of social work activities (outer circle), and the features most commonly depicting social work efforts in the data. Social work practice addressing environmental issues and sustainable development is both improving and protecting the living environment and developing physical infrastructure and facilities as well as ensuring participation and empowerment through organisation and

mobilisation of people and establishing people's institutions. It is also increasing awareness of environmental issues, assessing the impacts of these on individuals and communities, and negotiating what issues to address and how. Social work has also a coordinative task bringing together necessary resources and partners and ensuring support to the efforts. Social work also promotes environmental justice through advocacy and mediation. The interventions are locally specified, usually community-based, and collaborative employing experts from multiple disciplines. Many of the practices describing social work efforts in the data are in common with mainstream social work, such as ensuring participation and empowerment, assessing community needs, and promoting awareness. Here they are applied to address not only social but also environmental issues and injustices.

Even though the frequency of activities included in different themes varied in the data, they are here displayed equal because of the overlapping between the themes, brought forth in chapter 6.1. The themes related to increasing awareness and information, ensuring participation and empowerment, and accumulating and coordinating resources, as well as adopting sustainable practices at work and home embody common activities according to the specific set of data used in this study. However, the set of data being rather limited does not allow making conclusions on the prevalence of these practices in social work addressing environmental and sustainability issues.

7 CONCLUSIONS

The purpose of this literature review is to explore the relationship between social work and biophysical environment and specifically to capture existing practices of social work addressing environmental issues and sustainable development. According to the results of this study social work practice addressing environmental issues and sustainable development is multi-faceted, containing both activities to directly improve biophysical environment, such as improving and protecting the living environment and developing physical infrastructure and facilities, as well as activities related to social organisation and resources, such as ensuring participation, mobilisation and organisation of people, and empowerment. Also increasing awareness of environmental issues and promoting environmental justice are among social work tasks. In addition, social work practice considering environmental issues and sustainable development includes assessing social impacts of environmental changes, negotiating locally what issues to address and how, and gathering the resources and partners necessary to deal with these issues. The interventions are locally specified, community-based and conducted as collaborative and multidisciplinary efforts employing not only social workers but also experts from other fields. Many of the activities are adopted from mainstream social work but accommodated to social work addressing issues related to biophysical environment, just as Coates (2003, 106) proposed.

Before conducting the literature review I got acquainted with discussions and recent literature on ecological, eco-social, environmental, and green social work. Thus the results of the review are not entirely inducted from the data but have been affected by the foreknowledge I already had. However, there seem to be some profound similarities between outlines for practice in theoretical literature and the results of this study depicting actualised social work addressing environmental issues and sustainable development. Ensuring participation and empowerment are prominent themes in both theoretical literature (Peeters 2016b; Dominelli 2013; Dominelli 2012; Peeters 2012a; Mason 2011; Matthies, Närhi & Ward 2001) and the data, embodying also social work activity such as mobilising people and social organisation such as establishing people's institutions. Participation is also an overarching presupposition in all social work activity described by the results, be it employing local people, supporting them in managing their communities and common resources, bringing them together with organisations able to assist them in current issues, or

engaging them in taking care of the environment. Also raising awareness (e.g. Dominelli 2012; McKinnon 2012) and assessing social impacts (Dominelli 2012; Närhi 2001) as crucial activities for ecological, green, and eco-social social work are adopted in real-world social work efforts addressing environmental issues. In addition, prevalence of community-based work, development of local solutions, and multidisciplinary collaboration are features common to both theoretical literature and actualised social work considering environmental issues and sustainable development.

There are also some differences. Developing and improving physical infrastructure and facilities is a significant part of actualised social work efforts embracing environmental and sustainability issues but not foreseen in the theoretical literature. Conversely, transition or transformation of society towards sustainability delineated in the theoretical literature (e.g. Peeters 2016a & 2016b) is not visible in the results. This may be due to the specific set of data used in this study or it may be that social work efforts depicted here constitute fragments of societal transformation which would be conveyed by literature published few years afterwards. Anyhow, this profound change called for in the theoretical literature is something not yet actualised, or at least captured in the data. This applies to building resiliency also. Many of the social work activities described in the results can be understood as means of building resiliency, helping people deal with environmental changes and cope with the resources they have (Buckingham & Kina 2015, 819) even though the concept of resiliency was rarely used in the data. In social work practice embracing the environmental approach resiliency may function as a framework or an encompassing goal for action even though it translates into various social work activities embodied in the results.

The results are compatible with the eco-social approach addressing both social and environmental questions as social work domain. The view on environment matches with ecological social work approach recognising the interconnectedness of people and their environment and acknowledging the multiple dimensions of environment: social, biophysical, political, economic, and cultural. Ecological, eco-social, environmental and green social work approaches all have elements in common and share a broader scope on environment in social work. In this sense social work practice depicted by the results of this study follows the path paved by these approaches and related discussions.

Theoretical literature also promoted political roles for social work (Gray, Coates & Hetherington 2013; Dominelli 2012; Mason 2011). The results indicate that social work addressing environmental issues does indeed include some activities more characteristic to political activism than conventional social work and that it indeed strives for change. Also for example ensuring environmental justice as social work duty implies that social work considers structural inequalities and pursues a renewed allocation of environmental risks and benefits. However, this specific data used and the results produced do not allow determining if current social work practice addressing environmental issues and sustainable development requires adopting *radically* new values into social work, besides accepting biophysical environment as a crucial interest for social work, and if it thus embraces the eco-critical approach challenging modern society and modern ways of living (Dominelli 2012, 194; Närhi & Matthies 2001).

This study might be one of the first if not first attempt to form a general view on existing social work practice considering issues related to biophysical environment and sustainable development by conducting a systematic literature review. The results of this study give an overview of ecological, environmental, eco-social, and green social work efforts actualised and provide a starting point for developing practice further. Even though the set of data used is rather limited, the results of this study prove that there already exists a range of practices applied in social work to address environmental issues and sustainable development. This implies that there are at least some tools and means available for social workers to consider environmental issues in their work, if there are no professional or organisational constraints to do so, such as lack of time or support (McKinnon 2013; Marlow & Van Rooyen 2001). On the other hand, figuring out local interconnections between social and environmental issues and developing solutions to complex issues such as climate change require building partnerships and networks providing resources such as versatile knowledge and skills and influential support to change current policies.

As an implication for future research an object of interest are the outcomes of social work efforts addressing environmental issues and sustainable development. Even though some articles included in this systematic literature review provided with evaluations of outcomes, these were not comparable or generalisable. As social work discussions on biophysical environment and sustainable development expand, as I predict on the grounds of increasing

amount of publications on the subject in recent years, there should be also endeavours to capture both outcomes of efforts and the added value of social work involvement.

BIBLIOGRAPHY

Alston, M. & Besthorn, F. H. (2012) Environment and Sustainability. In Lyons, K., Hokenstad, T., Pawar, M., Huegler N. & Hall N. (eds.) *The SAGE Handbook of International Social Work*. London: Sage Publications Ltd., 56–69.

Alston, M., Matthies, A.-L. & MacKinnon, J. (2016) Conclusion: Developing an ecological practice framework. In McKinnon, J. & Alston, M. (eds.) *Ecological Social Work. Towards Sustainability*. London: Palgrave, 218–221.

Auerbach, C. & Silverstein, L. B. (2003) *Qualitative Studies in Psychology: Qualitative Data: An Introduction to Coding and Analysis*. New York/London: New York University Press.

Aveyard, H. (2010) *Doing a literature review in health and social care: a practical guide* (2nd edition). Maidenhead, Berkshire: Open University Press.

Bartlett, H. M. (2003) Working Definition of Social Work Practice. *Research on Social Work Practice* 13 (3), 267–270.

Besthorn, F. H. (2015) Ecological Social Work: Shifting Paradigms in Environmental Practice. In Elsevier International Encyclopedia of the Social and Behavioral Sciences (2nd Edition), 871–877.

Besthorn, F. H. (2014) Environmental Social Work: A Future of Curiosity, Contemplation and Connection. In Hessle, S. (ed.) *Environmental Change and Sustainable Social Development. Social Work – Social Development Volume II*. London: Ashgate, 13–22.

Besthorn, F. H. (2012) Deep Ecology's contributions to social work: A ten-year retrospective. *International Journal of Social Welfare* 21 (3), 248–259.

Bexell, S. M. & Rechkemmer, A. (2016, unpublished) A Critical Analysis of Inclusion Gaps in Directly Relevant Sustainable Development Themes, Facts and Findings in Recent Social Work Research. Information retrieved from:
<http://sswr.confex.com/sswr/2016/webprogram/Paper26054.html> (22.10.2016)

Boetto, H. (2016) Developing ecological social work for micro-level practice. In McKinnon, J. & Alston, M. (eds.) *Ecological Social Work. Towards Sustainability*. London: Palgrave, 59–77.

Buckingham, S. & Kina V. J. (2015) Sustainable development and Social Work. In Elsevier International Encyclopedia of the Social and Behavioral Sciences (2nd edition), 817–822.

Carrilio, T. E. (2007) Utilizing a social work perspective to enhance sustainable development efforts in Loreto, Mexico. *International Social Work* 50 (4), 528–538.

Case, R. A. (2016) Eco-social work and community resilience: Insights from water activism in Canada. *Journal of Social Work*. Published online before print April 20, 2016.
doi: 10.1177/1468017316644695.

Coates, J. (2003) *Ecology and Social Work. Toward a New Paradigm*. Halifax: Fernwood.

Conservation Social Work. University of Denver Graduate School of Social Work, Global Practice –blog. Information retrieved from: <http://gsswblog.du.edu/globalpractice/about/conservation-social-work/> (22.10.2016)

- Curry, P. (2011). *Ecological Ethics. An Introduction* (2nd edition). Cambridge: Polity Press.
- Dominelli, L. (2013) Environmental justice at the heart of social work practice: greening the profession. *International Journal of Social Welfare*, 22 (4), 431–439.
- Dominelli, L. (2012) *Green Social Work. From Environmental Crises to Environmental Justice*. Cambridge: Polity Press.
- Dylan, A. (2013) Environmental sustainability, sustainable development and social work. In Gray, M., Coates, J. & Hetherington, T. (eds.) *Environmental Social Work*. London/New York: Routledge, 62–87.
- Gambrill, E. (2003) A Client-focused Definition of Social Work Practice. *Research on Social Work Practice* 13 (3), 310–323.
- Gray, M., Coates, J. & Hetherington, T. (eds.) (2013) *Environmental Social Work*. London/New York: Routledge.
- Hart, M. A. (2015) Indigenous Social Work. In *Elsevier International Encyclopedia of the Social and Behavioral Sciences* (2nd edition), 804–810.
- Hayward, R. A., Miller, S. E. & Shaw, T. V. (2013) Social work education on the environment. In Gray, M., Coates, J. & Hetherington, T. (eds.) *Environmental Social Work*. London/New York: Routledge, 246–259.
- Hek, G. & Langton, H. (2000) Systematically searching and reviewing literature. *Nurse Researcher* 7 (3), 40–58.
- Hessle, S. (ed.) (2014) *Environmental Change and Sustainable Social Development. Social Work – Social Development Volume II*. London: Ashgate.
- Hopkins, R. (2008) *The transition handbook: From oil dependency to local resilience*. Totnes: Green Books.
- IFSW (2012) Policy statement on globalisation and the environment. Information retrieved from: <http://ifsw.org/policies/globalisation-and-the-environment/> (11.10.2016)
- IFSW, IASSW & ICSW (2012) The global agenda for social work and social development commitment to action. Information retrieved from: <http://cdn.ifsw.org/assets/globalagenda2012.pdf> (11.10.2016)
- IPCC (2014) *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Information retrieved from: <https://www.ipcc.ch/report/ar5/syr/> (2.10.2016)
- Karls, J. M. & Wandrei, K. E. (1992) PIE: A New Language for Social Work. *Social Work* 37 (1), 80–85.
- Kemp, S. P. (2011) Recentring environment in social work practice: necessity, opportunity, challenge. *British Journal of Social Work* 41 (6), 1198–1210.
- Kiteley, R. & Stogdon, J. (2014) *Literature Reviews in Social Work*. London: Sage.
- Lane, M. (1997) Community work, social work: Green and postmodern? *British Journal of Social Work* 27 (3), 319–341.

- Lyons, K., Hokenstad, T., Pawar, M., Huegler N. & Hall N. (eds.) (2012) *The SAGE Handbook of International Social Work*. London: Sage Publications Ltd.
- Lysack, M. (2012) Building capacity for environmental engagement and leadership: An ecosocial work perspective. *International Journal of Social Welfare* 21 (3), 260–269.
- Marlow, C. & Van Rooyen, C. (2001) How Green Is the Environment in Social Work? *International Social Work* 44 (2), 241–254.
- Mason, R. (2011) Confronting Uncertainty: Lessons from Rural Social Work, *Australian Social Work*, 64 (3), 377–394.
- Matthies, A.-L., Närhi, K. & Ward, D. (eds.) (2001) *The eco-social approach in social work*. Jyväskylä: SoPhi.
- McKinnon, J. (2012) Social Work and Changing Environments. In Lyons, K. et al. (eds.) *The SAGE Handbook of International Social Work*. London: Sage Publications Ltd, 265–278.
- McKinnon, J. & Alston, M. (eds.) (2016) *Ecological Social Work. Towards Sustainability*. London: Palgrave.
- Molyneux, R. (2010) The Practical Realities of Ecosocial Work: Review of the Literature. *Critical Social Work* 11 (2), 61–69.
- Muldoon, A. (2006) Environmental efforts: The next challenge for social work. *Critical Social Work* 7 (2), 1–7.
- Närhi, K. (2001) Social impact assessment. New challenges for social work? In Matthies et al. (eds.) (2001) *The eco-social approach in social work*. Jyväskylä: SoPhi, 54–83.
- Närhi, K. & Matthies, A.-L. (2016) Conceptual and historical analysis of ecological social work. In McKinnon, J. & Alston, M. (eds.) *Ecological Social Work. Towards Sustainability*. London: Palgrave, 21–38.
- Närhi, K. & Matthies, A. L. (2001) What is the ecological (self-)consciousness of social work? Perspectives on the relationship between social work and ecology. In Matthies et al. (eds.) *The eco-social approach in social work*. Jyväskylä: SoPhi, 16–53.
- Payne, M. (2014) *Modern Social Work Theory* (4th edition). Basingstoke/New York: Palgrave Macmillan.
- Peeters, J. (2016a). A safe and just space for humanity: The need for a new concept of well-being. In McKinnon, J. & Alston, M. (eds.) *Ecological Social Work. Towards Sustainability*. London: Palgrave, 177–196.
- Peeters, J. (2016b) Empowerment, resilience and social capital: Building blocks for a sustainability transition. In McKinnon, J. & Alston, M. (eds.) *Ecological Social Work. Towards Sustainability*. London: Palgrave, 197–217.
- Peeters, J. (2012a) Social work and sustainable development: towards a social-ecological practice model. *Journal of Social Intervention: Theory and Practice* 21 (3), 5–26.
- Peeters, J. (2012b) The place of social work in sustainable development: Towards ecosocial practice. *International Journal of Social Welfare* 21 (3), 287–298.

- Rambaree, K. (2013) Social Work and Sustainable Development: Local Voices from Mauritius. *Australian Social Work* 66 (2), 261–276.
- Ranta-Tyrkkö, S. & Das, A. (2016) Grassroots ecological social work in India. In McKinnon, J. & Alston, M. (eds.) *Ecological Social Work. Towards Sustainability*, 141–157.
- Rapeli, M. (2016) Sosiaalityö ja katastrofitilanteet kansainvälisissä tutkimuksissa – kirjallisuuskatsaus. In Jäppinen, M., Metteri, A., Ranta-Tyrkkö, S. & Rauhala, P. L. (eds.) *Kansainvälinen sosiaalityö. Käsitteitä, käytäntöjä ja kehityskulkuja. Sosiaalityön tutkimuksen vuosikirja 2016*. Tallinn: United Press Global, 248–272.
- Raymaekers, P. (2016) Social Impact Assessment for social workers. In McKinnon, J. & Alston, M. (eds.) *Ecological Social Work. Towards Sustainability*. London: Palgrave, 112–124.
- Saini, M. & Shlonsky, A. (2012) *Systematic Synthesis of Qualitative Research*. New York: Oxford University Press.
- Sempik, J., Hine, R. & Wilcox, D. (eds.) (2010) *Green Care: A Conceptual Framework. A Report of the Working Group on the Health Benefits of Green Care, COST Action 866, Green Care in Agriculture*. Loughborough: Loughborough University.
- Stehlik, D. (2013) Social work practice with drought-affected families: An Australian case study. In Gray, M., Coates, J. & Hetherington, T. (eds.) *Environmental Social Work*. London/New York: Routledge, 135–155.
- United Nations (2015) *Transforming Our World: The 2030 Agenda For Sustainable Development*. Information retrieved from: <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> (6.11.2016)
- Whittemore, R. & Knafl, K. (2005) The integrative review: updated methodology. *Journal of Advanced Nursing* 52 (5), 546–553.

ANNEX 1 TABLE OF DATA

	Reference information	Location	Type & aim of study	Description of social work action	Strengths and limitations
1	Agoramoorthy, G. & Hsu, M. J. (2015) Irrigation-based social work relieves poverty in India's drylands. <i>International Social Work</i> 58 (1), 23–31.	India	A qualitative study demonstrating how water-based social work can be employed in dryland villages in order to enhance agriculture and improve livelihoods of farming families	Social workers of a NGO discussing with community about water harvesting needs, raising funds, fixing and improving the lift-irrigation system, helping farmers set up community level cooperatives, and helping to solve water-related disputes.	Peer-reviewed, relevant, and credible In some areas work has begun already in 1977
2	Agoramoorthy, G. & Hsu, M. J. (2008) Reviving India's grassroots social work for sustainable development. <i>International Social Work</i> 51 (4), 544–555.	India	A mixed-methods study examining NGO social work program focusing on establishing cooperatives as civil associations (see previous article)	Social workers of a NGO developing water harvesting systems, social forestry, horticulture, biogas plants, and sanitation blocks, and creating grassroots institutions such as irrigation- and joint forest cooperatives, watershed associations, and self-help groups.	Peer-reviewed, relevant, and credible
3	Agoramoorthy, G., Chaudary, S. & Hsu M. J. (2009) Sustainable development using small dams: an approach to avert social conflict and relieve poverty in India's semi-arid regions. <i>Asia Pacific Journal of Social Work and Development</i> , 19 (2), 52–69.	India	A mixed-methods study examining NGO social work program to help rural villages (see previous articles)	Social workers of a NGO raising awareness of water management, raising funds, and creating grassroots institutions including joint forest-, milk-, horticulture-, and irrigation cooperatives, check dam management groups, women's self-help groups, youth clubs, farmers' clubs, and watershed associations.	Peer-reviewed, relevant, and credible
4	Al-Makhamreh, S., Ahabusi, H. & Asfour, H. (2016) Social Work Field Training for the Community: A Student Self-Directed Approach in the Environmental Domain in Jordan. <i>British Journal of Social Work</i> 46 (4), 855–872	Jordan	A mixed-methods study discussing the significance of a students' self-directed approach in environmental field training	Social work students conducting a local community assessment seeking the impacts of Synchrotron-Light project on villagers' health, social life, and environment.	Peer-reviewed, relevant, and credible

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5	Boetto, H & Bell, K. (2015) Environmental sustainability in social work education: An online initiative to encourage global citizenship. <i>International Social Work</i> 58 (3), 448–462.	Australia	A qualitative study exploring the role of social work education as a vehicle for preparing Australian social work students for becoming informed and active global citizens with regard to environmental sustainability	Piloting an online social work course consisting of six workshops on different ecological social work themes.	Peer-reviewed and credible Relevancy questionable as describes social work education with no practical action
6	Borrell, J., Lane S. & Fraser, S. (2010) Integrating environmental issues into social work practice: lessons learnt from domestic energy auditing. <i>Australian Social Work</i> 63 (3), 315–328.	Australia	A descriptive article depicting domestic energy audit practice combining social work with domestic energy abatement	Social workers providing financial counselling and aid, supporting lifestyle changes, and providing individual and group advocacy to involve landlords, businesses, and housing departments.	Peer-reviewed and relevant Does not clearly state how social work is involved and what aspects are merely suggestions for social work
7	Carrillo, T. E. (2007) Utilizing a social work perspective to enhance sustainable development efforts in Loreto, Mexico. <i>International Social Work</i> 50 (4), 528–538.	Mexico	A qualitative study on development in a small town, illustrating ways that social work perspective can contribute to addressing sustainability and social development	Social work researchers engaging in community-needs assessment project to better understand social effects of economic and environmental changes.	Peer-reviewed and credible Relevancy questionable as argues for emphasising social aspects besides economic and environmental aspects of assessment
8	Cetingok, M. & Rogge, M. (2001) Turkey's Southeast Anatolia Project (GAP), Environmental Justice and the Role of Social Work. <i>Social Development Issues</i> 23 (3), 12–17.	Turkey	An article exploring Turkish public development program and environmental justice implications and suggesting social work roles in similar programs.	Social workers advocating to ensure fair treatment of citizens, enhancing participation, participating in interdisciplinary partnerships, mediating, researching, and educating citizens, government officials, and other stakeholders.	Peer-reviewed and relevant Possible research methods not expressed; difficult to tell apart existing and suggested roles for social work

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9	Dominelli, L. (2011) Climate change: social workers' roles and contributions to policy debates and interventions. <i>International Journal of Social Welfare</i> 20 (4), 430–438.	Case 1: Argentina Case 2: United Kingdom	A qualitative study, consisting of two case studies, arguing that social workers need to get involved in raising awareness of climate change, building resilience of communities, and dealing with natural disasters	Case 1: Community social workers helping a community to form partnerships to replace natural gas and wood burning with solar power. Case 2: Community social workers identifying fuel poverty and unemployment as issues to address and providing alternatives by bringing together stakeholders to develop a self-sustainable energy community.	Peer-reviewed, relevant and credible
10	Dylan, A. (2015) Ecology and Social Justice: A Course Designed for Environmental Social Work in Rural Spaces. <i>Contemporary Rural Social Work</i> 7 (1), 26–38.	Canada	A descriptive article accounting the development and success of the 'Ecology and Social Justice' social work course to enhance environmental social work knowledge and skills	Social work students applying environmental theories to a specific issue and organizing a consciousness-raising event.	Peer-reviewed, relevant, and credible
11	Ersing, R. L., Avivor, J. S., Alhassan, O. & Caruson, K. (2016) Ecological social work in a developing nation: Africa. In McKinnon, J. & Alston, M. (eds.) <i>Ecological Social Work. Towards Sustainability</i> , 125–140.	Ghana	A qualitative study to explore strengths and vulnerabilities of women in preparing for and recovering from a disaster	Social work scholars conducting a participatory action research, empowering women as leaders in risk reduction, working with a local non-profit organisation, and creating a community toolkit to mitigate risks from social and natural environments.	Relevant and credible Article in edited book
12	Evans, S., Hills, S. & Orme, J. (2012) Doing More for Less? Developing Sustainable Systems of Social Care in the Context of Climate Change and Public Spending Cuts. <i>British Journal of Social Work</i> 42 (4), 744–764.	United Kingdom	A qualitative study exploring how sustainable development can be implemented within adult social care and describing a range of good practices for embedding sustainability in social care services	Social work sustainability initiatives include reducing travel mileage, adapting an environmental management and audit scheme standard EMAS, considering environmental and social implications in acquisition of services, establishing sustainable development officer and a sustainability steering group, developing an action plan towards risks from climate change to vulnerable people and service delivery, and service co-production and increasing support networks.	Peer-reviewed, relevant, and credible

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13	Lane, M. (1997) Community work, social work: Green and postmodern? <i>British Journal of Social Work</i> 27 (3), 319–341.	Australia	An autobiographical, theory-related article studying community work and green and postmodern political social work theories and their implications to social work practice	Community social workers planning community action over pollution and rampant development, assisting groups to work on issues such as unemployment, transport, urban planning, flooding, and pollution, linking jobs and environment, and starting projects such as community gardens and barter systems.	Peer-reviewed, relevant, and credible
14	Lombard, A. & Twikirize, J. M. (2014) Promoting social and economic equality: Social workers' contribution to social justice and social development in South Africa and Uganda. <i>International Social Work</i> 57 (4), 313–325.	Case 1: South Africa Case 2: Uganda	A qualitative study to investigate how social workers in South Africa and Uganda enact social work as a human rights profession and development social work to promote social and economic equality	Case 1: Among social work efforts there are growing seedlings to sell and to supply to gardens for HIV orphans and families, training organisations in starting gardens and producing vermicompost to sell. Case 2: Among efforts to help children there are raising funds and improving access to safe water by installing springs and improving hygiene and sanitation.	Peer-reviewed, relevant, and credible
15	Lucas-Darby, E. T. (2011) The New Color Is Green: Social Work Practice and Service-Learning. <i>Advances in Social Work</i> 12 (1), 113–125.	United States	A descriptive article portraying social work community practice course which includes a service-learning requirement with 'greening' as a theme	Social work students working with communities to implement green service-learning projects on reducing dog waste, improving a local school's environment, and raising awareness on recycling and its global impacts.	Peer-reviewed, relevant, and credible
16	Lysack, M. (2015) Effective policy influencing and environmental advocacy: Health, climate change, and phasing out coal. <i>International Social Work</i> 58 (3), 435–447.	Canada	A qualitative study profiling policy-influencing alliance of health and environmental NGOs, and exploring the role of social work in developing effective policy change for phasing out coal	Social worker chairing the network and taking part in researching health impacts and economic costs of coal, campaigning for policy change, connecting with other experts and politicians, and seeking support for job re-training for coal industry workers.	Peer-reviewed, relevant, and credible
17	Marlow, C. & Van Rooyen, C. (2001) How Green Is the Environment in Social Work? <i>International Social Work</i> 44 (2), 241–254.	United States & South Africa	A quantitative study examining if and how social workers incorporate physical and biological environmental or green issues into practice	Social workers incorporating environmental issues in their practice in several ways, for example promoting volunteerism, lobbying, utilizing therapeutic contact with nature, cleaning up the environment, recycling, and educating to increase awareness of environmental issues.	Peer-reviewed, relevant, and credible

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18	McKinnon, J. (2013) The Environment: A Private Concern or a Professional Practice Issue for Australian Social Workers? Australian Social Work 66 (2), 156–170.	Australia	A qualitative study exploring the relevance of environment to social work practice and revealing factors that enable or constrain integrating environmental values and issues in practice	Social workers introducing recycling and resource reduction practice changes at workplaces, assessing sustainability of modes of practice, considering environment-related issues at casework, and recognizing links between social and environmental justice and issues and therapeutic effects of nature.	Peer-reviewed, relevant, and credible
19	Mutie, Pius Mutuku. (2014) The Quest for Clean Water in Kenya: Social Workers' Uneasy Role. In Hessele, S. (ed.) Environmental Change and Sustainable Social development Social Work – Social Development volume II. London: Ashgate, 91–100.	Kenya	A descriptive article exploring and suggesting social work roles in water security, supply and management	Social workers of NGOs working with local communities in awareness creation, planning and implementation of water projects, and ensuring participation of communities in sustainability projects.	Relevant but not providing case examples Article in edited book
20	Norton, C. L., Holguin, B. & Manos, J. (2013) Restoration not incarceration: An environmentally based pilot initiative for working with young offenders. In Gray, M., Coates, J. & Hetherington, T. (eds.) Environmental Social Work. London/New York: Routledge, 172–192.	United States	A descriptive article on a pilot initiative engaging formerly incarcerated young adults in ecological restoration program	Shelter social workers developing the program among other partners and case-managing for the participants, providing access to access hot meals and accommodation, anger and stress management, medical services, substance abuse counselling, legal aid and mental health counselling.	Relevant and credible Article in edited book
21	Phillip, D. & Reisch, M. (2015) Rethinking Social Work's Interpretation of 'Environmental Justice': From Local to Global. Social Work Education 34 (5), 471–483.	United States	A qualitative study analysing the emergence of the environmental justice movement and presenting a case study to demonstrate how social workers can use their knowledge to contribute	A social worker of a human rights group and a group of high school students initiating a human right study and campaigning to block construction of a waste-to-energy incinerator in the town.	Peer-reviewed, relevant, and credible

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22	Rambaran, K. (2013) <i>Social Work and Sustainable Development: Local Voices from Mauritius</i> . Australian Social Work 66 (2), 261–276.	Mauritius	A qualitative study considering three areas as influential to eco-critical social work in Mauritius: anti-oppressive practice, promotion of social justice, and critical thinking.	Social workers engaging in sustainable development programs through community empowerment and development activities, for instance working with fishing communities to enhance their livelihoods and direct them towards marine protection.	Peer-reviewed, relevant, and credible
23	Ranta-Tyrkkö, S. & Das, A. (2016) Grassroots ecological social work in India. In McKinnon, J. & Alston, M. (eds.) <i>Ecological Social Work: Towards Sustainability</i> , 141–157.	India	A descriptive article providing an overview of social work in India and discussing ecological social work through two practical examples	Case 1: NGO social workers training and building capacity of rural communities in natural resource management among health, education, and social issues, restoring natural resources, promoting marginalised groups, and developing farming activities. Case 2: University social workers assisting people in organising social movements to demand improved status and housing.	Relevant and credible Article in edited book
24	Rogge, M. E., Davis, K., Maddox, D. & Jackson, M. (2006) Leveraging environmental, social, and economic justice at Chattanooga Creek. <i>Journal of Community Practice</i> , 13 (3), 33–53.	United States	A qualitative study on neighbourhood-based action to promote environmental cleanup and to reverse economic oppression in a neighbourhood bordering the most polluted waterway in the southeastern United States	A social work practitioner, an academic, and an intern studying neighbourhood-based resilience and community action arising from environmental pollution and social and health problems, and bringing in resources by presenting the issue, developing grant proposals, and arranging workshops.	Peer-reviewed, relevant, and credible
25	Ross, D. (2013) <i>Social work and the struggle for corporate social responsibility</i> . In Gray, M., Coates, J. & Hetherington, T. (eds.) <i>Environmental Social Work</i> . London/New York: Routledge, 193–210.	Australia	A qualitative study on social workers engaging in a struggle between multinational mining companies and neighbouring communities	Social science researchers as mediators coordinating the interests of the mining company, the community and the government, applying socio-environmental justice principles, developing local knowledge, and addressing unequal power dynamics.	Relevant and credible Article in edited book

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26	Shepard, B. (2013) Community gardens, creative community organizing, and environmental activism. In Gray, M., Coates, J. & Hetherington, T. (eds.) Environmental Social Work. London/New York: Routledge, 121–134.	United States	A qualitative study on a campaign utilizing community mobilization and action to save community gardens in New York City	A social work researcher participating in organizing the campaign to save community gardens, in mobilization of people for the cause, in direct action including non-violent protests and media activism, and in fundraising and legal strategies.	Relevant and credible Article in edited book
27	Stehlik, D. (2013) Social work practice with drought-affected families: An Australian case study. In Gray, M., Coates, J. & Hetherington, T. (eds.) Environmental Social Work. London/New York: Routledge, 135–155.	Australia	A qualitative study on how environment might be considered in social work practice and how crises like droughts impact farming communities and social work delivery	Expert social panel examining impacts of drought to individuals, families, and local communities; social workers of government-run Centrelink providing income support payments and counselling to families affected by drought.	Relevant and credible Article in edited book
28	Vandenabeele, J., van Poeck, K. & Peeters, J. (2016) Building sustainable urban communities. In McKinnon, J. & Alston, M. (eds.) Ecological Social Work. Towards Sustainability. London: Palgrave, 78–93.	Belgium	An article examining how community building, social learning, citizenship, democracy and participation relate to social work addressing sustainability issues and presenting practice examples of social work engaging people living in poverty in sustainability efforts	Case 1: Community social workers recruiting housing departments and residents in an energy-saving project. Case 2: Establishing renovations project to get underprivileged groups to benefit from sustainability measures and to address structural, social, and political energy issues in housing. Case 3: Setting up a complementary currency system to provide opportunities to get involved in economic practices by converting time, e.g. redesigning and taking care of public places, for "Torekes".	Relevant and credible Article in edited book
29	Weber, B. A. (2012) Social Work and the Green Economy. Advances in Social Work 13 (2), 391–407.	United States	An ethnographic account of social worker's efforts to help residents reduce energy costs and carbon output and to make use of social work perspective and skills towards green economy	Designing, implementing and assessing feasibility of energy alliance program, contacting stakeholders; social worker roles multiple: researcher, proposal writer, communicator, planner, manager, educator, promoter and negotiator depending on the need.	Peer-reviewed, relevant, and credible