

Electronic Supplementary Material

Reducing meat consumption in developed and transition countries to counter climate change and biodiversity loss: a review of influence factors

Prof. Dr. Susanne Stoll-Kleemann (corresponding author)

Uta Schmidt, M.Sc.

Ernst-Moritz-Armdt University of Greifswald, Chair of Sustainability Science and Applied Geography, Friedrich-Ludwig-Jahn-Str. 16, 17487 Greifswald, Germany

susanne.stoll-kleemann@uni-greifswald.de; uta.schmidt@uni-greifswald.de

First author	Year	Title	Method	Data	Category	No. of factors	Factors
<b>ISI Web Search</b>							
Antonetti	2014	Feelings that make a difference: How guilt and pride convince consumers of the effectiveness of sustainable consumption choices	QN	EmP	OB	2	ECD, PBC
Axsen	2013	Developing sustainability-oriented values: Insights from households in a trial of plug-in hybrid electric vehicles	QL	EmP	OB	4	VA, HT, N, FE
Axsen	2013	Social influence and consumer preference formation for pro-environmental technology: The case of a UK workplace electric-vehicle study	QL	EmP	OB	2	HT, N
Barker	2009	Educational attainment, perceived control and quality of women's diets	QL	EmP	DB	2	PBC, KS
Barr	2002	Perceptions and practices of self-defined current vegetarian, former vegetarian, and nonvegetarian women	QN	EmP	M	3	VA, KS, HT
Barr	2006	Sustainable lifestyles: Framing environmental action in and around the home	QN	EmP	OB	5	VA, KS, HT, N, FE
Barr	2011	Helping People Make Better Choices: Exploring the behaviour change agenda for environmental sustainability	QL	EmP	OB	7	VA, ECD, KS, HT, PBC, N, FE
Barrena	2010	Frequency of consumption and changing determinants of purchase decision: from attributes to values in the organic food market	QL	EmS	DB	3	VA, ECD, HT
Beardsworth	1992	The vegetarian option. Varieties, conversions, motives and careers	QL	EmP	M	5	VA, ECD, KS, HT, N
Bobić	2012	Personality Traits, Motivation and bone health in vegetarians	QN	EmP	M	2	VA, HT
Brown	2009	Motivations of consumers that use local, organic fruit and vegetable box schemes in Central England and Southern France	QN	EmP	DB	1	VA
Cabieses	2013	At the edge of individual cognitive-behavioural policies: how to walk the public health path to effectively improve population health?	R	EmP	M	1	FE
Cordts	2014	Consumer Response to Negative Information on Meat Consumption in Germany	QN	EmP	M	4	VA, KS, HT
Darmon	2008	Does social class predict diet quality?	R	EmS	DB	2	KS, HT
de Boer	2014	"Meatless days" or "less but better"? Exploring strategies to adapt Western meat consumption to health and sustainability challenges	QN	EmP	M	4	PBC, KS, HT, FE
Deckers	2009	Vegetarianism, sentimental or ethical?	R	EmS	M	2	VA, ECD
Defila	2014	Sustainable consumption. An unwieldy object of research	R	EmS	OB	8	VA, PBC, HT, N, I, CR, FE, EP
Ding	2011	Habit, BSE, and the Dynamics of Beef Consumption	QN	EmP	M	1	HT
Dyett	2013	Vegan lifestyle behaviors. An exploration of congruence with health-related beliefs and assessed health indices	QN	EmP	M	2	VA, HT
Egea	2013	Toward Consumption Reduction: An Environmentally Motivated Perspective	QN	EmP	OB	4	VA, DPT, KS
Ejabou	2013	The effect of using consumption taxes on foods to promote climate friendly diets - The case of Denmark	QN	EmP	M	2	EP, FE
Ericson	2014	Mindfulness and sustainability	R	EmS	OB	3	VA, ECD, PBC, N
Fessler	2003	Disgust sensitivity and meat consumption: a test of an emotivist account of moral vegetarianism	QL	EmP	M	2	VA, ECD
Filippi	2010	The Brain Functional Networks Associated to Human and Animal Suffering Differ among Omnivores, Vegetarians and Vegans	QN	EmP	M	1	ECD
Fischer	2014	Competencies for and beyond Sustainable Consumption: An Educational Contribution to the Debate	R	EmS	OB	5	PBC, KS, N, EP, FE
Fox	2008	Health, ethics and environment: A qualitative study of vegetarian motivations	QL	EmP	M	1	VA
Girod	2014	Climate policy through changing consumption choices: Options and obstacles for reducing greenhouse gas emissions	R	EmS	OB	5	PBC, KS, HT, EP, FE
Greenebaum	2012	Veganism, Identity and the Quest for Authenticity	QL	EmP	M	2	VA, I
Hanss	2013	Promoting purchases of sustainable groceries: An intervention study	QN	EmP	OB	2	PBC, KS
Haverstock	2012	To eat or not to eat. A comparison of current and former animal product limiters	QN	EmP	M	4	VA, HT, I, N
Heiskanen	2010	Low-carbon communities as a context for individual behavioural change	QL	EmP	OB	3	PBC, N, FE
Hoek	2011	Replacement of meat by meat substitutes. A survey on person- and product-related factors in consumer acceptance	QN	EmP	M	2	VA, HT
Hoffman	2013	Differences between health and ethical vegetarians. Strength of conviction, nutrition knowledge, dietary restriction, and duration of adherence	QN	EmP	M	1	VA
Howell	2013	It's not (just) "the environment, stupid!" Values, motivations, and routes to engagement of people adopting lower-carbon lifestyles	QL	EmP	OB	3	VA, ECD, N
Hupkova	2009	Structural changes in the beef meat demand in Slovakia and demand elasticity estimation	QN	EmP	M	3	VA, DPF, KS
Jin	2003	The effect of the BSE outbreak in Japan on consumers' preferences	QN	EmP	M	1	KS
Joyce	2012	Reducing the environmental impact of dietary choice: perspectives from a behavioural and social change approach.	R	EmS	M	1	VA
Kenyon	1998	Attitudes towards meat-eating in vegetarian and non-vegetarian teenage girls in England - an ethnographic approach	QL	EmP	M	5	VA, ECD, KS, HT, N
Kim	2009	Measurement and communication of greenhouse gas emissions from US food consumption via carbon calculators	R	EmP	DB	1	KS
Lanfranco	2014	Household demand elasticities for meat products in Uruguay	QN	EmP	M	3	DPF, HT, FE
Larsson	2002	Lifestyle-related characteristics of young low-meat consumers and omnivores in Sweden and Norway	QN	EmP	M	3	DPF, N, I
Larsson	2003	Veganism as status passage - The process of becoming a vegan among youths in Sweden	QN	EmP	M	1	VA
Latvala	2012	Diversifying meat consumption patterns: Consumers' self-reported past behaviour and intentions for change	QN	EmP	M	1	HT
Lea	2006	Consumers' readiness to eat a plant-based diet	QN	EmP	M	4	KS, HT, DPF, FE
Lea	2006	Public views of the benefits and barriers to the consumption of a plant-based diet	QN	EmP	M	4	DPF, KS, HT, FE
Lindeman	2000	Measurement of ethical food choice motives	QN	EmP	M	2	VA, HT
Lindeman	2001	Food choice ideologies: the modern manifestations of normative and humanist views of the world	QN	EmP	DB	4	VA, HT, N, CR
Mäkinieni	2011	Ethical and unethical food. Social representations among Finnish, Danish and Italian students	QL	EmP	DB	1	N
Mäkinieni	2014	Barriers to climate-friendly food choices among young adults in Finland	QN	EmP	M	3	VA, PBC, HT
Marquart	2003	Whole grain health claims in the USA and other efforts to increase whole-grain consumption	R	EmS	DB	5	PBC, KS, HT, FE, EP
McGee	2008	Perceptions of factors influencing healthful food consumption behavior in the lower Mississippi delta. Focus group findings	QL	EmP	DB	4	PBC, KS, CR, DPF
Moreira	2004	Educational and economic determinants of food intake in Portuguese adults: a cross-sectional survey	QN	EmP	DB	2	KS, HT
MorenoGomez	2012	Clustering of lifestyle factors in Spanish university students: the relationship between smoking, alcohol consumption, physical activity and diet quality	QN	EmP	M	1	HT

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Morrison	2003	Expenditure on different categories of meat in Greece: the influence of changing tastes	QN	EmP	M	2	HT, CR
Nath	2010	Gendered fare? A qualitative investigation of alternative food and masculinities	QL	EmP	DB	2	KS, N
Paisley	2008	Dietary change: What are the responses and roles of significant others?	QL	EmP	DB	2	N, DPF
Palaniswamy	2003	Vegetarianism and human health	R	EmS	M	1	KS
Peattie	2010	Green consumption: behavior and norms	R	EmS	OB	8	VA, ECD, DPF, PBC, KS, HT, N, I
Phillips	1999	Complex systems model of dietary choice with implications for improving diets and promoting vegetarianism	R	T	M	3	PBC, KS, HT
Pollard	1998	Motives underlying healthy eating: Using the food choice questionnaire to explain variation in dietary intake	QN	EmP	DB	3	VA, KS, HT
Pribis	2010	Beliefs and attitudes toward vegetarian lifestyle across generations	QN	EmP	M	1	VA
Redman	2014	Transforming sustainable food and waste behaviors by realigning domains of knowledge in our education system	QN	EmP	DB	1	KS
Reid	2010	Theorizing the meso level: the household as a crucible of pro-environmental behaviour	R	EmS	OB	3	PBC, N, I
Revell	2013	Promoting sustainability and pro-environmental behaviour through local government programmes: examples from London, UK	QL	EmP	OB	1	FE
Richardson	1933	Current attitudes and future influences on meat consumption in the UK	QN	EmP	M	5	VA, KS, HT, N, DPF
Rothgerber	2013	Real Men Don't Eat (Vegetable) Quiche: Masculinity and the Justification of Meat Consumption	QN	EmP	M	3	VA, N, I
Rothgerber	2014	RA comparison of attitudes toward meat and animals among strict and semi-vegetarians	QN	EmP	M	2	VA, ECD
Rothgerber	2014	Horizontal hostility among non-meat eaters	QN	EmP	M	2	I, N
Santos	1996	Influences on meat avoidance among British students	QL	EmP	M	5	VA, ECD, PBC, HT, N
Schor	2005	Prices and quantities: Unsustainable consumption and the global economy	R	EmS	DB	2	EP, FE
Schösler	2012	Can we cut out the meat of the dish? Constructing consumer-oriented pathways towards meat substitution	QN	EmP	M	3	KS, HT, CR
Sneijder	2009	Normalizing ideological food choice and eating practices. Identity work in online discussions on veganism	QL	EmP	M	2	I, N
Southerton	2013	Habits, routines and temporalities of consumption: From individual behaviours to the reproduction of everyday practices	R	EmS	OB	2	ECD, HT
Sparks	2002	The role of moral judgments within expectancy-value-based attitude-behavior models	QN	EmP	OB	3	VA, PBC, N
Thøgersen	2014	Unsustainable consumption. Basic causes and implications for policy	R	EmS	OB	8	VA, ECD, KS, PBC, HT, N, EP, FE
Tobler	2011	Eating green. Consumers' willingness to adopt ecological food consumption behaviors	QN	EmP	M	3	VA, PBC, HT
van Wezemael	2010	Consumer perceptions of beef healthiness: results from a qualitative study in four European countries	QL	EmP	M	3	VA, PBC, N
Vartanian	2015	Impression management and food intake. Current directions in research	R	EmS	M	2	N, I
Verbeke	2001	A fresh meat almost ideal demand system incorporating negative TV press and advertising impact	QN	EmP	M	2	ECD, KS
Verbeke	2008	Impact of communication on consumers' food choice	R	EmS	DB	2	KS, HT
Vranken	2014	Curbing global meat consumption: Emerging evidence of a second nutrition transition	QN	EmP	M	2	CR, FE
Walley	2014	A review of UK consumers' purchasing patterns, perceptions and decision making factors for poultry meat	R	EmS	M	4	VA, KS, HT, FE
Wiig	2008	The art of grocery shopping on a food stamp budget: factors influencing the food choices of low-income women as they try to make ends meet	QN/QL	EmP	M	3	VA, KS, HT
Worsley	1998	Teenage vegetarianism. Prevalence, social and cognitive contexts	QN	EmP	M	7	VA, ECD, PBC, KS, HT, N, I

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<b>Snowball Methodology</b>							
Ajzen	1991	The theory of planned behaviour	R	EmS	OB	3	VA, PBC, N
Bailey	2014	Livestock - Climate change's forgotten sector. Global public opinion on meat and dairy consumption	QN	EmP	M	1	KS
Bastian	2012	Don't mind meat? The denial of mind to animals used for human consumption	QN	EmP	M	2	VA, ECD
Benning	2011	Subventionen für die industrielle Fleischerzeugung in Deutschland. BUND-Recherche zur staatlichen Förderung der Schweine- und Geflügelproduktion in den Jahren 2008 und 2009	R	EmS	M	1	EP
Beardsworth	1991	Vegetarianism, veganism, and meat-avoidance: Recent trends and findings	QL	EmP	M	1	VA
Beardsworth	2004	Meat consumption and meat avoidance among young people. An 11-year longitudinal study	QN	EmP	M	2	ECD, HT
Bergmann	2010	Cognitive dissonance and individuals' response strategies as a basis for audience segmentation to reduce factory farmed meat consumption	QL	EmP	M	3	VA, KS, ECD
Briesbroek	2013	On the nature of barriers to climate change adaptation	R	EmS	OB	4	EP, FE, PBC
Buschmann	2013	Ökonomische Instrumente für eine Senkung des Fleischkonsums in Deutschland.	R	EmS	M	1	EP
Cialdini	1990	A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places	QN	EmP	OB	1	N
Cordts	2013	Imageprobleme beeinflussen den Konsum. Von unbekümmerten Fleischessern, Flexitariern und (Lebensabschnitts-)Vegetariern	QN	EmP	M	2	DPF, HT
Dagevos	2013	Sustainability and meat consumption: is reduction realistic?	QN	EmP	M	4	VA, HT, EP, FE
Darnton	2008	Reference Report: An overview of behaviour change models and their uses	R	T	OB	11	VA, HT, PBC, ECD, KS, DPF, N, I, CR, EP, FE
Darnton	2013	Influencing behaviours. A technical guide to the ISM tool	R	T	OB	11	VA, HT, PBC, ECD, KS, DPF, N, I, CR, EP, FE
de Boer	2013	Climate change and meat eating: An inconvenient couple?	QN	EmP	M	3	VA, KS, HT
Dibb	2014	Let's talk about meat: changing dietary behaviour for the 21st century	R	EmS	M	7	VA, HT, PBC, ECD, KS, CR, FE
Festinger	1957	Theory of Cognitive Dissonance	R	T	OB	1	ECD
Furst	1996	Food choice. A conceptual model of the process	QL	EmP	DB	7	VA, HT, PBC, KS, DPF, N, FE
Garnett	2014	Appetite for change. Social, economic and environmental transformations in China's food system	R	EmS	M	4	VA, DPF, EP, FE
Garnett	2015	Policies and actions to shift eating patterns: What works? A review of the evidence of the effectiveness of interventions aimed at shifting diets in more sustainable and healthy directions	R	EmS	M	7	VA, HT, ECD, KS, N, EP, FE
Gedrich	2003	Determinants of nutritional behaviour: a multitude of levers for successful intervention?	R	EmS	DB	5	VA, ECD, HT, N, FE
Gifford	2014	Personal and social factors that influence pro-environmental concern and behaviour: A review	R	EmS	OB	8	VA, ECD, PBC, DPF, KS, N, I, CR
Gifford	2011	The dragons of inaction. Psychological barriers that limit climate change mitigation and adaptation	R	EmS	OB	7	VA, ECD, PBC, DPF, KS, N, I
Goldberg	2002	Personality traits and eating habits: The assessment of food preferences in a large community sample	QN	EmP	DB	2	DPF, HT
Graca	2015	Meat, beyond the plate. Data-driven hypotheses for understanding consumer willingness to adopt a more plant-based diet	QN	EmP	M	4	VA, ECD, HT
Griskevicius	2010	Going green to be seen: Status, reputation, and conspicuous conservation	QN	EmP	OB	1	N
Grunert	2001	Food-related lifestyle: A segmentation approach to European food consumers	R	EmS	DB	2	VA, I
Harmon-Jones	1999	Cognitive dissonance: Progress on a pivotal theory in social psychology	R	EmS	OB	2	VA, ECD
Herman	2008	External cues in the control of food intake in humans: The sensory-normative distinction	R	T	DB	1	HT
Higgs	2015	Social norms and their influence on eating behaviours	R	EmS	DB	2	N, I
Hoek	2004	Food-related lifestyle and health attitudes of Dutch vegetarians, non-vegetarian consumers of meat substitutes, and meat consumers	QN	EmP	M	2	VA, DPF
Janda	2001	Vegetarianism: Toward a greater understanding	QN/QL	EmP	M	5	VA, ECD, HT, DPF, N
Jones	2014	The growing price gap between more and less healthy foods: Analysis of a novel longitudinal UK dataset	QN	EmP	DB	1	FE
Joy	2005	Humanistic psychology and animal rights: Reconsidering the boundaries of the humanistic ethic	R	T	M	3	VA, ECD, N
Keller	2012	Instrumente im Sinne einer nachhaltigen, klimafreundlichen Fleischproduktion	R	EmS	M	2	EP, FE
Keller	2015	Does personality influence eating styles and food choices? Direct and indirect effects	QN	EmP	DB	2	DPF, HT
Laestadius	2013	Meat consumption and climate change: the role of non-governmental organizations	QL	EmP	M	1	N
Laestadius	2014	We don't tell people what to do: An examination of the factors influencing NGO decisions to campaign for reduced meat consumption in light of climate change	QL	EmP	M	3	N, EP, FE
Lea	2001	Influences on meat consumption in Australia	QN	EmP	M	3	N, KS, HT
Lea	2008	Australian consumers' food-related environmental beliefs and behaviours	QN	EmP	DB	2	KS, ECD
Leahy	2010	An estimate of the number of vegetarians in the world	QN	EmP	M	2	CR, EP
Lewin	1951	Field theory in social sciences. Selected papers on group dynamics	R	T	OB	2	HT, N
Loewenstein	2001	Risk as feelings	R	T	OB	1	ECD
Loughnan	2014	The psychology of eating animals	R	EmS	M	4	VA, ECD, I, N
Loughnan	2010	The role of meat consumption in the denial of moral status and mind to meat animals	QN	EmP	M	2	VA, ECD
McKenzie-Mohr	2000	Promoting sustainable behavior: An introduction to community-based social marketing	R	EmS	OB	1	KS
Noppers	2014	The adoption of sustainable innovations: Driven by symbolic and environmental motives	QN	EmP	OB	3	I, N, FE
O'Riordan	2015	The challenges of seeking to change dietary behavior towards more sustainable consumption of livestock products	R	EmS	M	5	VA, HT, PBC, ECD, N
Piazza	2015	Rationalizing meat consumption. The 4Ns	QN	EmP	M	5	VA, ECD, KS, N, HT
Povey	2001	Attitudes towards following meat, vegetarian and vegan diets: an examination of the role of ambivalence	QN	EmP	M	6	VA, HT, PBC, KS, N, I
Rao	2013	Do healthier foods and diet patterns cost more than less healthy options? A systematic review and meta-analysis	R	EmS	DB	2	EP, FE
Rauschmayer	2012	Transition to sustainability: Not only big, but deep	R	EmS	DB	6	VA, ECD, KS, N, I, EP
Ritson	2001	The Economics of food choice: Is price important?	R	EmS	DB	1	EP
Rothgerber	2014	Efforts to overcome vegetarian-induced dissonance among meat eaters	QN	EmP	M	3	VA, PBC, I
Ruby	2011	Meat, morals, and masculinity	QN	EmP	M	2	I, N
Salonen	2012	Vegetarian diets: A way towards a sustainable society	QN	EmP	M	3	VA, HT, N

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Schösler	2015	Meat and masculinity among young Chinese, Turkish and Dutch adults in the Netherlands	QN	EmP	M	2	I, CR
Sexton	2013	Market power, misconceptions, and modern agricultural markets	R	EmS	DB	2	EP, FE
Shepherd	2001	Does taste determine consumption? Understanding the psychology of food choice	R	EmS	DB	5	VA, PBC, HT, N, I
Speer	2001	The relationship between social cohesion and empowerment: Support and new implications for theory	QN	EmP	OB	2	PBC, N
Stoll-Kleemann	2015	The sustainability challenges of our meat and dairy diets	R	EmS	M	5	ECD, DPF, KS, EP, FE
Triandis	1999	Interpersonal behaviour	R	T	OB	4	VA, KS, HT, FE
Tucker	2014	The significance of sensory appeal for reduced meat consumption	QL	EmP	M	5	HT, DPF, KS, N, CR
Twigg	1979	Food for Thought: Purity and Vegetarianism	R	EmS	M	1	N
Verain	2015	Flexitarians: a range of sustainable food styles	QN	EmP	M	3	N, DPF, VA
Vinnari	2014	A framework for sustainability transition: The case of plant-based diets	R	EmS	M	7	VA, ECD, KS, HT, N, I, CR
Wansink	2007	Mindless eating. The 200 daily food decisions we overlook	QN	EmP	OB	4	PBC, KS, HT, N
Westhoek	2011	The Protein Puzzle. The consumption and production of meat, dairy and fish in the European Union	R	EmS	M	5	T, KS, ECD, EP, FE
Wilhelm	2005	Nachhaltige Ernährung in der Ernährungskommunikation ausgewählter Institutionen Qualitative Fallanalysen von Experteninterviews	QL	EmP	M	5	I, KS, HT, FE, EP
Withana	2012	Study supporting the phasing out of environmentally harmful subsidies	R	EmP	M	1	EP
Wyker	2010	Behavioral change theories can inform the prediction of young adult's adoption of a plant-based diet	QN	EmP	M	4	VA, PBC, KS, N

**Legend**

M = meat related, DB = dietary behaviour, OB = other behavior

R = Review, QL = Qualitative, QN = Qualitative

EmP = Empirical with primary data, EmS = Empirical with secondary data, T = Theoretical

VA = Values & Attitudes

ECD = Emotions & Cognitive Dissonance

PBC = Perceived Behaviour Control

KS = Knowledge & Skills

DPF = Demographic Factors, Personal Traits & Family Customs

N = Social Norms, Social Roles & Relationships

I = Social Identity & Lifestyles

HT = Habits & Tastes

CR = Culture & Religion

EP = Economic & Political Aspects

FE = Food Environment