

# Media Framing and Shaping of Individual Accountability: Responsibilisation in the Biodiversity Discourse

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# Media Framing and Shaping of Individual Accountability: Responsibilisation in the Biodiversity Discourse

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## Abstract

Biodiversity is declining rapidly due to human activity, jeopardizing international conservation and sustainability goals. Effective societal discourse is essential for fostering support for the transformational changes needed to preserve biodiversity, with the media playing an important role in shaping public perception. This study examines how media framing influences the responsabilisation of individuals in the context of biodiversity. Utilising Giesler and Veresiu's framework of individual responsabilisation and Entman's framing theory, the research analyses 152 articles from three UK newspapers, identifying actors responsible/responsibilised for biodiversity loss, those affected by it, and those responsible for proposing and acting on solutions. Results show that collective entities like "we" and "humanity" were most frequently mentioned, followed by governments, businesses, and systems, with individuals being the least cited. Proposed solutions were generally vague in nature, but referred primarily to systemic and policy changes, as well as individual actions like reduced consumption and civic participation. These findings suggest that responsabilisation occurs on a system level and generally lacks individualisation. The media discourse on biodiversity and responsibility of involved actors remains abstract, and further studies are recommended to examine the effect this may have on public perception of biodiversity conservation efforts.

*Keywords: Individualisation, personalisation, responsabilisation, biodiversity, news media*

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# 1. Introduction

Due to increased human activity since the industrial revolution, the world's biodiversity has been decreasing at an alarming rate (IPBES, 2019). Biodiversity loss is according to Rockström et al. (2009) the most critical planetary system boundary that has been exceeded and in the Global Assessment Report on Biodiversity and Ecosystem Services, published by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), it is reported that the threats to biodiversity continue to intensify. The primary threat is human activity, through land-use change, habitat fragmentation, climate change, harvesting, hunting and pollution (Tittensor et al., 2014). With current trajectories, the goals for conservation and sustainable use of nature cannot be met and transformational change is needed to reach goals for 2030 (IPBES, 2019).

Biodiversity, lacking a universal scientific definition, generally refers to the species richness of a region, spanning from genes to ecosystems (Swingland, 2001). Biodiversity is essential to maintain healthy ecosystems that support all life, including human life. However, in society, the perceived value of biodiversity varies and is in conflict with other objectives such as local access to natural resources and fair benefits division between global North and South, along with differing interpretations of its normative meaning (Jetzkowitz, 2017). To address these conflicts, a social science perspective that emphasises diverse interpretations, justifications of objective prioritisation, and identification of involved actors is needed (Brunet et al., 2020; Jetzkowitz, 2017). Such research is crucial in understanding how societal support for biodiversity solutions may come about, as science advancement alone cannot ensure biodiversity conservation without engaging the public and/or decision makers (Legagneux et al., 2018). Without societal support, technical solutions will be insufficient.

Societal support is shaped by the discourses surrounding societal issues, encompassing scientific, policy and public discourses (Moy & Bosch, 2013). Research has demonstrated that public perception, influenced by these discourses, in turn impacts the level of public support for biodiversity conservation efforts (Macdonald et al., 2023; Niemiec et al., 2022). Further, Legagneux et al. (2018) emphasise the need for an international communication strategy to increase public awareness on biodiversity issues. Therefore, fostering a constructive discourse on biodiversity is important for generating the public support necessary for the transformational changes needed in biodiversity conservation and sustainable use of nature.

A potent force shaping societal perception of societal issues is the media, with its extensive information dissemination (Semetko & Valkenburg, 2000). The media can influence how the audience perceives the causes, consequences and solutions of an issue (Semetko & Valkenburg,

2000) and contribute to political civic participation (Keum et al., 2004; Livingstone & Markham, 2008). Further, the media highlights different actors' responsibility for the cause and solutions of issues (Semetko & Valkenburg, 2000), which will have an influence on the public's perception of who is to take action to address societal issues.

Studies have shown that how actors are made responsible influence behavioural intention such as increased policy support. An example is the study by Shreedhar and Thomas-Walters (2022) on responsibility of marine bycatch in Ireland in the media. They found that a media narrative that attributed responsibility to both the consumers and the fishing industry led to an increase in policy support of bycatch regulations. It did not, however, affect individual intentions to change consumption of fish by reduction or consumption of only sustainable fish. Attributing responsibility to only the consumer led to responsibility diffusion (bystander effect) and had no effect on policy support or behavioural intention. Similar results regarding attributed responsibility were demonstrated in a study by Jeong et al, indicating the importance of how actor responsibility is framed.

There has been a particular emphasis on the individual within media discourses for realising broader societal change across a range of societal issues, such as public health (Hoofdt et al, 2018; Orste et al., 2021; Temmann et al., 2021) and more specifically on the consumer within societal discourses of poverty and sustainable consumption (Ehgartner, 2018; Giesler & Veresiu, 2014; Kristiansen et al., 2020). When not addressed as a consumer, the individual may be responsabilised as a citizen (Begg et al., 2017; Maniates, 2001). By directly urging individuals to act, or by indirectly emphasising their role, responsibility for solving societal problems is placed on the individual. Despite the focus on the responsibility of the individual in the aforementioned contexts, little is known about their prominence within the biodiversity discourse.

Considering the influence that media has had on actor responsabilisation and consequently public support for grand challenges of the world, the aim of this study is to research if similar discourses of individualisation is ongoing in the biodiversity discourse. This insight can aid in the understanding of how support for a transition to a biodiversity-friendly society is being influenced. Due to this topic being under researched, the following paper aims to fill this research gap by answering the following research question: How is the responsabilisation of actors framed in the context of biodiversity in the media? More specifically, how is the individual framed in the biodiversity discourse?

## 2. Theoretical framework

This chapter will explore literature on individualization and responsabilisation discourse and the role of media in shaping such discourse through the role of attribution of responsibility framing.

### 2.1 Responsibilisation through individualisation

In contemporary discourse, responsibility encompasses both individual and collective accountability, intertwining rational judgement, legal obligations, and moral duties (Trnka & Trundle, 2014). This notion has evolved to encompass the concept of responsabilisation, which entails the expectation and assumption of social actors' reflexive moral capacity (Shamir, 2008).

Shamir (2008) argues that responsabilisation aligns with the neoliberal moralisation of the market, in which market entities and individuals are seen as rational economic actors with inherent moral duties to society. The broader trend in governance is moving away from top-down bureaucratic control towards a market-based system where market entities are increasingly tasked with assuming socio-moral responsibilities, in which traditional laws are turned into guidelines and promote self-regulation. Through this market-based system, actors are given personal freedom and opportunities for self-realisation under the expectation that they take accountability for their own actions and outcomes (Pyysiäinen et al., 2017). This process leads to individualisation: as individuals are free to make autonomous decisions within the market structure, they become responsible for maintaining social order as societal issues shift from being governmental problems to ones for individuals to solve. Furthermore, individualisation and responsabilisation can also occur through grassroot processes, where individuals voluntarily create crisis responses when existing market structures fail to do so (Gollnhofer & Kuruoglu, 2018) and through social contracts that involves relations of care and collective obligations (Trnka & Trundle, 2014).

### 2.2 Responsibilisation of the consumer and the citizen

The focus on the individual to solve societal issues has, like already described, been studied in a range of fields. In the field of consumer studies, various conceptualizations of responsible individuals have emerged, such as “green consumer” (Vysotska & Vysotskyi, 2022), “responsible consumer” (Giesler & Veresiu, 2014), “ethical consumer” (Carrington et al., 2020) and “development consumer” (Kipp & Hawkins, 2015). As a form of responsible consumer behaviour, ethical consumerism is an undeniable trend, denoting consumerism in which not only factors of quality and convenience are considered, but also political,



environmental and social dimensions (Kutaula et al., 2024), combining the traditional consumer values with those of citizen responsibilities.

Giesler & Veresiu (2014) identified four processes through which individualisation and responsabilisation of the consumer takes place: *personalisation, authorisation, capabilisation, and transformation* (PACT). The processes shift responsibility from the state and businesses to the individual consumer. Personalisation involves shaping individuals' behaviour by framing the solution to a social issue as the development of more ethical personal conduct, rather than prioritising collective efforts for protection and redistribution (Giesler & Veresiu, 2014). For instance, in addressing issues like severe poverty, individuals are framed as empowered consumers capable of enacting change through entrepreneurial practices and self-realisation while the welfare state is portrayed as passing citizens for being weak, vulnerable and in need of salvation (Giesler & Veresiu, 2014).

Several studies have examined how individuals are responsabilised through societal discourses about the environment (Döbbe & Cederberg, 2023; Evans et al., 2017; Kipp & Hawkins, 2015; Shreedhar & Thomas-Walters, 2022). These studies indicate that discourses on climate change and food systems are shifting from an individual-focused perspective in which the consumer is seen as the main contributor to issues, towards a systemic perspective emphasising shared responsibility and broad understanding of the problem. However, Kristiansen et al. (2020) found contrasting results when analysing UK and US elite media's coverage of animal agriculture and climate change, noting a greater emphasis on consumer responsibility over that of government or businesses, often framed in terms of everyday lifestyle actions like reduced meat consumption, veganism, or opting for products with a lower carbon footprint.

While consumer responsabilisation focuses on individual actions and market-based solutions, often neglecting the need for systemic change and institutional support, the citizen responsabilisation highlights the importance of collective action and informed public engagement in addressing societal issues (Maniates, 2001). The traits of the ideal 'good citizen', highlights active, respectful, self-disciplined individuals who participate constructively in society and the economy, both nationally and globally (Hammett & Staeheli, 2011; Staeheli & Hammett, 2010).

When determining whether it is the consumer or the citizen that is individualised and responsabilised, one can consider the freedoms associated with each role. For consumers, the freedom of choice encompasses decisions about what to consume, in what quantities and whether to consume at all. Responsible consumer behaviour can manifest in the form of the aforementioned green consumer, ethical consumer, and development consumer, all with the environment and/or social aspects taken into account in the consumption choice. In contrast, citizens' freedoms include the choice to vote and take part in civic communities. Despite the notion of the "good citizen" as someone who conforms to their given role, citizens also have the freedom to protest and criticise authority and decisions made within the state and non-state market contexts.

## 2.3 Media and framing

Online news media serves as a common platform for different discourses (Papworth et al., 2015), surpassing conventional media (newspaper, television and radio) due to globalisation (Chevallier et al., 2019). Media's influence is substantial, as half of the world's population uses the internet with potential access to online media (International Telecommunication Union, 2017). Media exposure to information on environmental issues has been linked to increased public awareness, risk perception and behavioural intention (Dong et al., 2018; Lineman, 2015; Zhao et al., 2018), thus likely having an influence on public perception of biodiversity.

When portraying issues, media often uses frames to give the presented information meaning (Scheufele, 1999). Neuman et al. (1992, p.60) define media frames as "conceptual tools which media and individuals rely on to convey, interpret and evaluate information". The process of framing can vary across topics (Semetko & Valkenburg, 2000). Due to the variability, it is crucial to conceptualise how frames can be identified in text when performing frame analysis. Entman (1993) conceptualised framing as being composed of four elements. Firstly, a particular problem definition that defines the issue, actors involved, and related cost and benefits. Secondly, the causes and consequences of the issue are defined, and who is responsible for these causes and effects. Thirdly, moral evaluation of the issue's implications are assessed against cultural values and norms. Lastly, treatment recommendations suggest potential solutions. Actors are a central part of framing and the issue of responsibility of actors in framing has evolved into its own distinct category: responsibility framing.

In a study by Semetko and Valkenburg (2000), they found the responsibility frame to be the most common frame in Dutch press and television media. The responsibility frame depicts an issue or problem in a way that suggests causation and solution responsibility lie with the government, individuals, or groups (Semetko and Valkenburg 2000). Responsibility framing was studied by Iyengar (1992) who attributed how the audience perceived responsibility to whether the issue was presented episodically in the form of specific events, or thematically, referring to abstract social contextualisation of the issue. This approach has, however, been shown inconsistent (Boukes, 2022; Semetko and Valkenburg, 2000). Other factors that are suggested to influence media's attribution of responsibility are the cultural and political context in which the news is produced (Semetko & Valkenburg, 2000), as well as the political standpoint of the news outlet (Kim, 2015).

Giving salience to issues, media frames have an effect on public and political agendas. McCombs and Shaw (1972) found that the issues that people regarded the most important followed the public issues that were presented in news media. The media does not only direct attention to certain issues, but also to specific attributes or perspectives of the issue. The media can assign agency to different actors through its framing, significantly affecting the behavioural intention. However, how the media creates the frame influences how successful it is in assigning moral agency. Shreedhar and Thomas-Walters (2022) demonstrate in their research that people may feel less inclined to act prosocial when there are many victims in need of help

(compassion fade), or when more than one actor is made responsible for the outcome (responsibility diffusion).

With compassion effect, studies show that featuring one victim rather than a larger group of victims increases the likelihood of donations (Kogut & Ritov, 2005; Small & Loewenstein, 2003; Västfjäll et al., 2014). For responsibility diffusion, the diffusion is likely to be higher in ambiguous contexts, for example when the victim is not in immediate danger (Shreedhar and Thomas-Walters, 2022). When there is moral ambiguity between how one's actions impacts another person, the diffusion is also likely to lead to higher self-interested behaviours (Dana et al., 2007).

Due to the effect that different frames can have on how the content is interpreted and the influence it has on people, using frames to analyse discourses is a good way to interpret what the discourse is signalling. By using Entman's (1993) conceptualisation of framing, elements of a discourse can be highlighted and the potential personalisation and responsabilisation of the individual be identified.

Thus, media framing is an important part of the theoretical framework when studying societal issue discourses and its effect responsabilisation of actors. Further, this study delves into the media's framing of responsibility, extending the understanding of actor responsabilisation characteristics.

### 3. Method

This study used discourse analysis to study the biodiversity discourse and responsabilisation of actors. Discourse analysis is a method employed across various academic fields and has previously been instrumental in studying the societal relationship with nature conservation (Buijs et al., 2022; Reinecke & Blum, 2018; Takala et al., 2019). By examining language use in society, discourse analysis sheds light on diverse social factors (Manzoor et al., 2018), making it a useful tool for the aim of this study. Framing analysis is then used to zoom in on how common understandings are created in interactions between actors, in this case the media and the reader (van Hulst et al., 2024).

Discourse analysis typically aims at deconstructing or understanding what structures of linguistic power are in place and explaining how particular policy decisions and institutionalization of rules and regulations occur. Framing analysis, on the other hand, helps to better understand how interactions work, and how identities and relationships evolve within these interactions.

This study analysed news media articles following the launch of the Global Assessment Report on Biodiversity and Ecosystem Services published by IPBES in 2019. The discourse after the report was studied to examine if the report had an influence on how responsibility was assigned in the light of new scientific knowledge and policy recommendations. The Summary for Policy Makers (IPBES, 2019) was released at an earlier date than the full report and with media reporting on the summary (Harvey, 2019), the Summary for Policy Makers was in focus for this thesis. The launch date for the Summary for Policy Makers was 6 of May 2019 (International Institute for Sustainable Development, 2019) and thereby the start of the studied timeline.

The studied news outlets were The Guardian, The Independent, and The Times. The three news outlets are based in the UK, with international recognition and readership, and report on a wide range of topics, with many articles on environmental issues. The Guardian reaches 82 million unique browsers each month across the globe (The Guardian Advertising, n.d.), The Independent has 21.4 million readers per month (The Independent Advertising, 2022), and The Times has 15 million readers per month in the UK (Publishers Audience Measurement Company, 2021). Compared to The Guardian and The Independent, The Times has a paywall which may affect the readership count.

The articles were selected via a systematic search, using the tool PRISMA. The initial search was conducted via Nexis Uni with the filter The Guardian (London), The Independent (United Kingdom), and The Times (London) and the timeframe 6 of May 2019 until 6 of August 2019. The search string was “biodiversity”. 355 articles were found, of which 45 were duplicates, resulting in 310 articles. In the screening phase, articles were excluded based on their title and

information details such as “section” and “byline”. Weekly briefing articles, and articles in letter format containing communication between the newspapers and their readers were among the excluded articles. See figure 1 for the number of articles excluded.

The eligibility of the articles was then checked. The full text of 276 articles were read and 46 articles were excluded based on a number of criteria, see figure 1. The final selection amounted to 230 articles. Of these, 2 disappeared in the process, probably due to content changes within Nexis Uni. 228 articles were coded with the programme Atlas.ti. The selected articles were both deductively and inductively coded.

Before all 228 articles had been coded, data saturation was reached. The studied timeline was adjusted to the two-month mark after the report release, instead of the third. This meant coding additional articles from the initial notion of data saturation, and this way, it could be ensured that data saturation had indeed been reached. This amounted to 152 articles, with an additional 8 articles being excluded in the coding phase due to not being relevant to the study. The Guardian contributed the most articles (57%), followed by The Times (25%), and The Independent (18%).

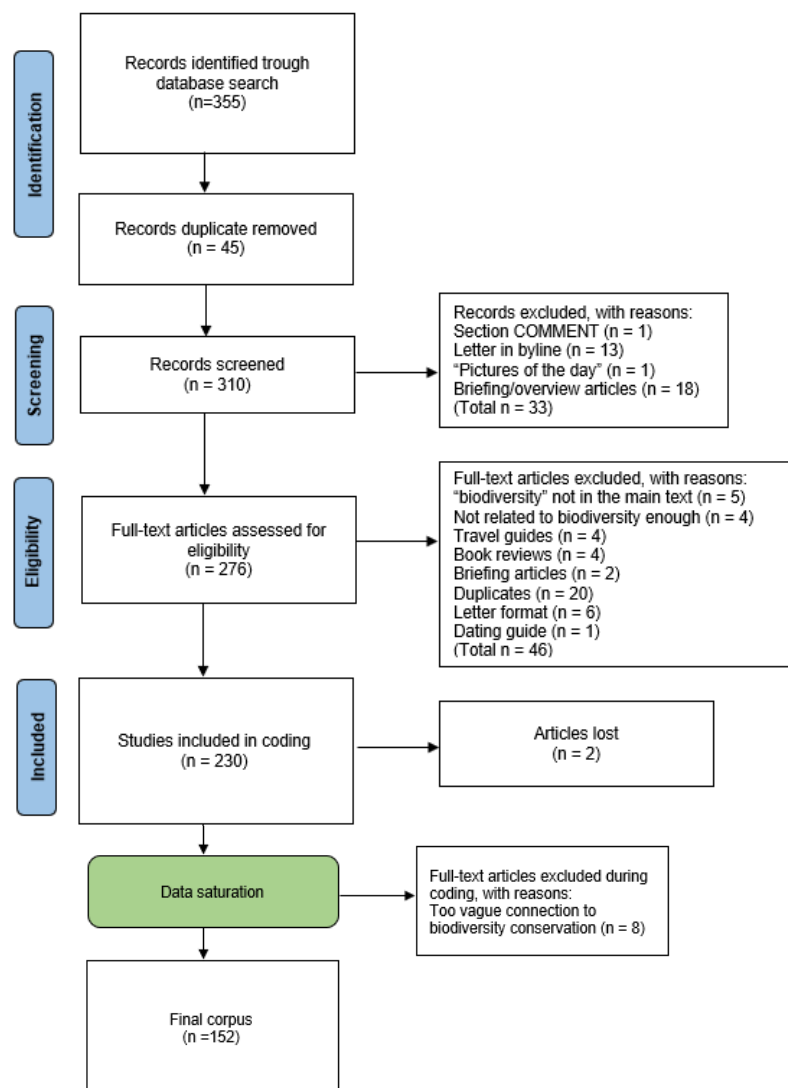


Figure 1: PRISMA flow chart.

The deductive codes were created with inspiration from Entman’s (1993) four elements of framing. The codes were designed to emphasise the actors involved, using the four elements to create structure in how the actors were mentioned, see table 1. Due to the articles being selected based on topic, problem definition was removed. Moral message was also excluded from the analysis. During coding, inductive codes were created to better capture nuances within the content. When the first coding of the articles was done, the codes and quotations were re-evaluated and re-coded to ensure consistent coding. Additional codes were created to further lend clarity to the data interpretation.

Table 1: Deductive codes inspired by Entman (1993).

Code	Explanation
Actors involved	Who is mentioned?
Causes and consequences of the issue	What action is mentioned?
Actors responsible for the causes and consequences	Who is mentioned?
Actors affected by the consequences	Who is mentioned?
Proposed solution	What action is mentioned?
Actors responsible for solution	Who is mentioned?

Through the process of deductive and inductive coding, six actor codes were created. Individualisation was defined as references to the current everyday individual person, addressed through terms such as consumers, citizen, or through mentioning actions by individuals. When the reader was addressed as “you”, this was also coded under the individual. When no actor was mentioned in relation to individual action, such as consumption, or no concrete action was mentioned, it was interpreted as system rather than individualisation. Governments, policy makers, politicians were distinguished from businesses, institutes, public figures, NGOs, and charities, to study the difference between governmental responsibility and market responsibility. See table 2 for an excerpt of the code book with the actor codes. For the full code book, see appendix A.

Table 2: Excerpt from the code book, visualising the six actor codes.

Level	Actor group	Explanation	Examples	Code
System	We & Humanity	References made to humans across generations.	“we”, “us”, “humanity”, “human(s)”, “since the arrival of people”, “future generations of people”	Inductive
	Systems	References to societal systems and industries.	“the economic system”, “agricultural system”, “the agricultural industry”,	Inductive
Group	Governments, policy makers, politicians	References to countries, political entities and policy makers.	“the government”, “politicians in Europe”, “ministers”, “Britain”	Deductive
	Businesses,	References to organisations or	“United Nations”, “Irish Wildlife	Deductive

	institutes, public figures, NGOs, charities	prominent people known to the public (excl. politicians).	Trust", "businesses", "IPBES", "supermarkets"	
	Groups	References to professional groups, philosophical belonging, lobbyist groups.	"naturalists", "environmentalists", "farmers", "scientists", "landowners", "extinction rebellion", "experts"	Inductive
Actor	The individual	References to the current everyday individual person. The reader may be addressed directly, or individual actions are mentioned.	"consumers", "tourists", "citizens", "the public", "homeowners", "children" "Thinking and acting green is a win for everybody: including you", "individual choice matters"	Deductive

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The interpretation of the data was done by studying patterns in the codes and exploring interesting topics surfacing from the initial insights. The different actor codes were studied closely to assess the context in which they were mentioned and how often they were mentioned. A co-occurrence table was examined to identify codes that co-occurred, in order to investigate patterns between the codes. For example, co-occurrence between the actor codes and codes for actors causing the problem, affected actors and actors responsible for solutions was central for the analysis when examining how often a certain actor was mentioned in each context.

In addition, during the analysis, it was noted that The Guardian changed their vocabulary regarding biodiversity to wildlife, likely affecting the number of articles found during the search. The implications of this vocabulary change are reflected on in the discussion.

## 4. Results

The results are structured into three sections based on the three actor involvement dimensions: actors made responsible for the effects and consequences on biodiversity, actors affected by these consequences, and actors made responsible to create and take solution initiatives. The actors that were frequently mentioned are presented below, together with any references to them.

### 4.1 Responsible for causing the consequences

The main actor mentioned in the context of causing the consequences on biodiversity was “we” and humanity, often through the mentioning of human activity.

“According to the report, three quarters of the Earth's land and two thirds of its waters have been "significantly altered" by human activity. Some 85 percent of the world's wetlands have been lost, depriving us of their services as natural water treatment facilities and flood defences. Humans have attacked some species by polluting the air and others by dumping sludge into the sea. Forests have been cut down and oceans overfished.” (in *Creatures Great and Small* The UN is right to highlight threats to biodiversity, but gets the solution wrong - *The Times*)

The IPBES report and its statement that the biggest threat to biodiversity is human activity were commonly mentioned throughout articles in all the newspapers. In more than 30 articles, human activity is mentioned as the main reason for biodiversity decline. Our lifestyles and our society were portrayed as reasons for this negative effect on biodiversity, for example our ‘boundless consumption’:

“We have all assumed that nature would always be here for us and our children. However, our boundless consumption, shortsighted reliance on fossil fuels and our unsustainable use of nature now seriously threaten our future.” (in *Loss of biodiversity is just as catastrophic as climate change; Nature is being eroded at rates unprecedented in human history but we still have time to stave off mass extinctions* - *The Guardian*)

Consumption was sometimes mentioned as the cause without mentioning of specific actors, suggesting the system of consumption being the problem:

“The assessment highlights how nature is "at death's door" on a planet ravaged by rampant overconsumption and drowning in pollution, where up to a million species are at risk of being wiped out.” (in *Treat global nature declines as an emergency, scientists tell world leaders; 'We need to declare an ecological emergency, not just a climate emergency'* - *The Independent*)

Next to overconsumption, agricultural systems were a commonly mentioned system. At times, farmers were specified as actors causing the problems. However, for the most part it was the current agricultural system that was pinpointed as the perpetrator:



“The IPBES report reveals that 3.2 billion people are suffering from degraded soils. We cannot feed our planet's growing population by destroying its soil. And soil erosion is also fuelling climate change because that earth contains three times more carbon than is in the atmosphere. Soil-destroying chemical farming means there are no insects or skylarks above our fields - and so we're experiencing this tragic loss of biodiversity.” (in We are full of bright ideas to solve ecological problems. So let's act on them; There is hope in the face of environmental crises. But we must all - farmers, citizens, politicians - embrace change - The Guardian)

Other mentions of systems were in relation to societal issues that create networks of problems resulting in issues which cannot be solved in isolation, and that system changes cannot be done overnight. This is acknowledged in an article from The Guardian:

“If you're going to do reforestation and you ignore the human issue - poverty - it's difficult to find success, because the forest is what people turn to last if they have no other sustainable livelihood.” (in Can planting billions of trees save the planet?; Organisations from around the world are reforesting at an unprecedented rate - The Guardian)

With half as many mentions as “we” and humanity, secondary perpetrators were governments, policy makers and politicians, corporations and funds, and systems. The governments, policy makers and politicians were usually mentioned to endanger biodiversity due to lack of action:

“Environment campaigners have warned that Scotland will lose vital legal safeguards because ministers have failed to ensure environment and pollution laws will be properly enforced after Brexit.” (in Scotland 'at risk of losing environmental protection after Brexit'; Campaigners urge Holyrood ministers to enshrine EU legal rights in national law - The Guardian)

Corporations were portrayed as money hungry entities, disregarding moral duties, negatively affecting biodiversity. Here is an example of companies' effect on the pangolin population in Africa:

“The medicinal benefits of the scales have been hyped by unscrupulous practitioners hoping to reap large profits. “Drug companies are making fabricated and exaggerated claims about the medical effects of the pangolin scales, even though there's not a thread of scientific proof,” Mr Zhou said.” (in Chinese smugglers killing off the pangolin; China - The Times)

About ¼ as many times mentioned as “we” and humanity, and half as often as the businesses and government actors, articles mentioned the individual as an actor responsible for causing the consequences on the environment, and directly or indirectly on biodiversity.

The individual was mentioned in variety of contexts with specific actions as causes to the consequences. For example, consumers' meat consumption, diverted attention, and gardening habits were mentioned. Other actions were tourists damaging nature. Here follows a few examples:

“Even before the new trade deal, the country-by-country breakdown by Trase – reported exclusively by the Guardian – reveals that meat consumers in Britain were indirectly responsible for up to 500 football pitches of land clearance in Brazil last year.” (in We must not barter the Amazon rainforest for burgers)

and steaks; The EU Mercosur trade deal is good news for Brazil's huge beef industry but devastating for the rainforest and environment - The Guardian)

“There is no need to cut down forests to make toilet roll, yet this is precisely what is happening,” said Alex Crumbie, a researcher for Ethical Consumer. “With consumer attention focused on plastic, some of the big brands have slowed and even reversed their use of recycled paper in the toilet rolls they make.” (in Toilet paper is getting less sustainable, researchers warn; Major brands are using less recycled paper, meaning more trees cut down unnecessarily - The Guardian)

“John Wyer, the co-founder of Bowles & Wyer, a garden design practice, says: “The more you clip, weed, clear up and powerwash, the worse the biodiversity. Gardens are at least four times more biodiverse than farmland, and the less you tidy up the better for wildlife.” (in The eco-friendly midsummer makeover; Stop power-washing patios and raking up leaves - a minimalist approach is required if you want a biodiverse garden, says Carol Lewis – The Times)

“Britain's oldest tree will wither within the next 50 years unless tourists stop ripping off branches for souvenirs, environmentalists have warned.” (in Oldest tree threatened by tourists seeking souvenirs – The Times)

In a few instances vague actions were mentioned:

“Individuals in the developed world have four times as much of an economic footprint as those in the poorest countries, and the gap is growing.” (in Human society under urgent threat from loss of Earth's natural life; Scientists reveal 1 million species at risk of extinction in damning UN report - The Guardian)

## 4.2 Affected by the consequences

Affected by the consequences created by other actors, some actors were portrayed as victims of biodiversity loss and conservation. In the articles, references were most often made to we, us, humanity, and humans. For example, in a The Guardian article the authors wrote:

“The alarming report follows a warning from a UN panel that the scale and pace of biodiversity loss is now endangering the foundations of human society itself.” (in EU 'outright dangerous' in its use of natural resources, says WWF About 2.8 planets would be needed - The Guardian)

As humanity is mentioned both in the context of being the cause of biodiversity loss and being the victim of biodiversity loss, this results in humanity hurting itself. Some articles acknowledge this, by describing how we destroy the very nature that we depend on, hence risking our own society:

“Our destruction of biodiversity and ecosystem services has reached levels that threaten our wellbeing.” (in Human activity has put a million species in danger, warns UN - The Times)

While the majority of the articles mentioning the IPBES report write how biodiversity decline is due to human activity, a number of articles do not acknowledge this. Instead, humanity is solely referred to as being negatively affected by the biodiversity decline:

“The new poll comes as a shocking new report from the United Nations this week finds biodiversity is declining at an unprecedented rate, with one million species at risk of extinction, and human populations in jeopardy if the trajectory is not reversed.” (in Australians overwhelmingly agree climate emergency is nation's No 1 threat; Lowy poll showing two-thirds of people say global warming is serious problem comes as shock UN report finds 1 million species at risk of extinction. - The Guardian)

Agriculture and economy were two systems that were presented as being threatened by a biodiversity collapse

“It [the UN report] said the collapse of nature posed a threat to human society, with agriculture and the economy set to be devastated by the loss of pollinating animals.” (in PM says bill that mentions testing makeup on animals is 'action' on extinction crisis; Scott Morrison claims to have passed laws 'dealing with that very issue' raised by the UN environment report – The Guardian)

The individual was rarely mentioned as an affected actor and is closely related to the “we” and humanity. Further, the connection to biodiversity was vague, and more often related to climate change. Some articles mention that people depend on nature and that jobs might be lost due to issues arising from initiatives to protect the environment:

“Rising water temperatures around the world are already killing off coral reefs and marine ecosystems upon which fish populations and people depend.” (in Precipitous Plunge The shrinking of Antarctic Sea ice should concern everyone – The Times)

“He told the Sydney Morning Herald the expansion of "green tape" - including native vegetation laws - was delaying projects like mining and "costs jobs"." (in PM's office silent after apparent reference to environment bill that doesn't exist; Scott Morrison said he had 'been taking action' on UN report about extinction of a million different species – The Guardian)

### 4.3 Responsible for solutions

Solutions and actors responsible for solving the issues were the most prominent topic throughout the articles. Commonly mentioned were “we” and “humanity”. “People”, “we”, and “humanity” were actively called on to take action and find a solution for biodiversity decline. An example can be seen in this quote from a The Times article:

“Anne Larigauderie, executive secretary of the Intergovernmental Platform on Biodiversity and Ecosystem Services, said that she wanted everyone to feel like they could be part of the solution. "We are really in this together," she added.” (in State 'must now declare a climate emergency' Million species face extinction globally, UN warns - The Times)

In another example, partially concrete solutions were suggested, but left out individualisation as everyone were addressed to take responsibility:

“But to do that, we must radically change the way we live, including how we use energy to power our societies, grow our food, and manage our waste. This is an immense task but many of the solutions are already at hand. Each of us has a role to play in bringing about this transformational change.” (in 'The future of life on Earth lies in the balance' - a picture essay; Almost 600 conservation experts have signed

a letter by the wildlife charity WWF, published to coincide with UN report into loss of biodiversity - The Guardian)

The need for "us" to take action was also often mentioned together with our role of having caused the problem:

"We made it happen and, with urgent action, we can stop it." (in World must undergo huge social and financial transformation to save future of human life, major report finds; 'It's time to rethink how we grow food, travel and look after the countryside: it may mean hard choices but the rewards are enormous - The Independent)

One article in The Guardian defined what "we" included, calling on everyone to act. However, no specific solution is given:

"It's action we're lacking, in government and beyond, as individuals and together as a species. If we act now we may be surprised at how these seemingly vast problems diminish quicker than we imagine." (in We are full of bright ideas to solve ecological problems. So let's act on them; There is hope in the face of environmental crises. But we must all - farmers, citizens, politicians - embrace change - The Guardian)

System change was at times mentioned as a solution, involving actors on all societal levels:

"The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever," he said. 'We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide.' The hopeful message was that it was 'not too late to make a difference, but only if we start now at every level from local to global'." (in Western lifestyles must change to avoid catastrophe, warns UN - The Guardian)

Policy makers and governments were another important actor that was mentioned as responsible for the solutions. They were called on to urgently create stricter regulations for sectors like energy, transport and agriculture. A few times "we" were mentioned together with the government and policy makers, and areas in need of policy support. The suggested solutions are to a certain extent specified but remains on a systemic level. An example of a concrete solution can be read in an article by The Guardian:

"We must stop destroying crucial habitats like the rainforests in order to grow more soya and palm oil ... the UK government urgently needs to play its part by restoring our peatlands, planting millions of trees, providing ocean sanctuaries around our coast and supporting a shift from meat and dairy to healthy, plant-based meals." (in UK urged to take lead on biodiversity as UN issues urgent warning; Ministers announce report on economic case for biodiversity, but activists insist actions, not studies, are needed - The Guardian)

However, more often the policy changes were not made explicit, except for the targeted sector.

"It says values and goals need to change across governments so local, national and international policymakers are aligned to tackle the underlying causes of planetary deterioration. This includes a shift in incentives, investments in green infrastructure, accounting for nature deterioration in international trade, addressing population growth and unequal levels of consumption, greater cooperation across sectors, new environmental laws and stronger enforcement." (in Human society under urgent threat from

loss of Earth's natural life; Scientists reveal 1 million species at risk of extinction in damning UN report - The Guardian)

Governments and corporations were at times targeted together.

“The IPBES report shows that governments and businesses are nowhere close to doing enough.” (in Loss of biodiversity is just as catastrophic as climate change; Nature is being eroded at rates unprecedented in human history but we still have time to stave off mass extinctions - The Guardian)

Governments were also responsible for facilitating change in other groups, such as farmers:

“Like all of us, farmers need help to embrace change - and we need to change what farm subsidies do. We need government supported low-interest loans to help farmers make these changes, to diversify and generate better opportunities for them, their families and their futures.” (in We are full of bright ideas to solve ecological problems. So let's act on them; There is hope in the face of environmental crises. But we must all - farmers, citizens, politicians - embrace change - The Guardian)

The government's role in changing consumer behaviours reoccurred several times, for example through policy changes supporting behavioural changes such as a shift from high meat consumption to plant-based meals, reduction of general consumption and shifts to sustainable transportation:

“Governments should focus, instead, on encouraging economic activity which is sustainable. That can mean incentivising consumers to change their habits. Experiments with a plastic-bag charge in this country and electric vehicle subsidies in Norway are good examples. “ (in Creatures Great and Small; The UN is right to highlight threats to biodiversity, but gets the solution wrong - The Times)

Mentioned about half as many times as “we” and humanity, corporations, and governments and policy makers, was the individual. When the individual is mentioned, it is in relation to consumption changes, civic participation or gardening methods. Phrases such as “individual choice matters” and “everyone can do something” were used and there were suggestions that since the government is not acting fast enough, the individual needs to take action. In the following two examples, the individual is assigned responsibility to change their consumption through changed household decisions, while the second quote visualises the vague actions that were often called on:

“Individual choices matter: 72% of global greenhouse gas emissions come from household decisions, including mobility (especially using cars and planes), diet (especially meat and dairy consumption), and housing (heating and cooling, and electricity consumption).” (in No flights, a four-day week and living off-grid: what climate scientists do at home to save the planet; What changes have the experts made to their own lives to tackle the climate emergency? - The Guardian)

“Mr Eliasch said the need for billionaires to follow suit was urgent, adding: "Governments have shown they are incapable of dealing with issues and that's what it comes down to: individuals. We all have to do things, not just talk about [it]." (in Meet the philanthropist tycoons making wild investment choices - The Times)

Boycotting products was also a recommendation to individuals:

“Until fishing is properly regulated and contained, we should withdraw our consent. Save your plastic bags by all means, but if you really want to make a difference, stop eating fish.” (in Stop eating fish. It's the only way to save the life in our seas; Unhindered by regulation, driven by greed, the fishing industry is the greatest threat to our oceans. We must take action - The Guardian)

Other consumption related recommendations were of consumers gardening and landscaping practices. Suggestions on how to bring more wildlife to the gardens was made, for example to build natural ponds rather than swimming pools:

“Swimming ponds are a great haven for wildlife, newts, water boatman and healthy microbes. There is great biodiversity and they look beautiful year round. They are also very easy to maintain.” (in The eco-friendly midsummer makeover; Stop power-washing patios and raking up leaves - a minimalist approach is required if you want a biodiverse garden, says Carol Lewis - The Times)

The mentioning of civic participation by the individual was in the form of protests and to vote:

“The next step, says scientists, is for the issue to be taken up by heads of state at this summer's G7 summit in France and for people on the streets to continue pushing for a decisive move away from business as usual.” (in Raise taxes on firms that harm nature, OECD tells G7 countries Report calls for change of priorities and culture to avert catastrophic biodiversity loss - The Guardian)

## 4.4 Summary of findings

We, humanity and people were frequently mentioned as responsible for the consequences, as victims of the consequences, and made responsible to solve the issue; farmers were either perpetrators or part of the solution, although not responsible to formulate the solutions; governments and politicians were the primary actors responsible for forming solutions (see table 3). Most mentions of actions refer to the need for policy change and/or systemic changes, for which the government and policy makers are made responsible. What these changes entail is, however, generally vague. In references to “we” and “us”, a definition of what actors were included in this broad naming was not clarified, but due to the context it was mentioned in, it was assumed to reference the global population.

Responsibilisation of the individual was occasional in which the individual actions by consumer, tourist, citizen, or similar, were singled out as the problem or solution to environmental problems. The direct link between the individual action and biodiversity loss was clearest for responsible for causing the consequences, but more often indirect connections were made. The nature of the individual actions was in general vague but quite consumption focused. However, recommendation for individual behavioural change was seen in the articles discussing gardening trends, in which specific actions were suggested.

*Table 3: Relative frequencies of articles (of the total number of articles) mentioning actors and the actions the context they were mentioned in. Selection of the most mentioned actors compared to The individual.*

Context	Actor	Mentions	Action
Causing the consequences	We & Humanity	38.2%	Human activity, overconsumption
	Businesses, institutes, public figures, NGOs, charities	22.4%	Business as usual
	Government, policy makers, politicians	23.0%	Inaction
	Systems	19.1%	Faulty systems
	The Individual	11.9%	Gardening, household emissions, tourists destroying nature, consumption
Affected by the consequences	We & Humanity	34.9%	Human population, society and our lifestyles are at risk.
	The Individual	9.9%	Threats to jobs available and do our existence.
Solutions	We & Humanity	41.5%	Call to action
	Businesses, institutes, public figures, NGO, charities	31.0%	Evolve businesses, rehabilitate habitats, eco-friendly farming, volunteer groups, stop eco-problematic trade
	Government, policy makers, politicians	51.3%	Policy change and implementation, encourage behavioural change in businesses, individuals and systems
	Groups	29.6%	Farmers need to change practices
	The Individual	22.4%	“Everyone can do something”. Meat reduction, gardening practices, fly less, vote, protest.

## 5. Discussion

In this study, responsibility was mainly given to societal actors such as governments, policy makers and humanity at large. Direct responsabilisation of the individual was observed, but to a limited extent. These results contrast those of previous research on climate change and food systems discourses in which individualisation was present (Döbbe & Cederberg, 2023; Evans et al., 2017; Kipp & Hawkins, 2015; Kristiansen et al., 2020). This study adds to previous literature by showing that, in the biodiversity discourse, emphasis is on shared responsibility and broad understanding of issues rather than on the individual.

### 5.1 Comparison to PACT

The PACT framework process of personalisation (Giesler & Veresiu, 2014) was rarely observed in the result. Instead, responsibility was foremost discussed on a systemic level, where “we” and humanity and system change played important roles. Governments and policy makers were frequently tasked to facilitate these system changes. While most descriptions of the changes were vague, there were some exceptions where solutions were more concretely formulated. These included improved agricultural practices, infrastructure, products, and service, which create incentives from groups and individuals to change their behaviour and assigns them responsibility.

For farmers, policies for changed agricultural practices assigns them agency indirectly. However, farmers are a group that often face limitations in their capacity to act due to system lock-ins. For individuals, changes in infrastructure, products, and services shifts responsibility through the process of capabilities, as the opportunities to practice their individual freedoms and the alternatives available to them were affected. Nevertheless, this transition was brief, as the primary target of the changes remained the system. Consequently, the individual’s role was solely instrumental in the broader societal change.

“We” and humanity, an unspecific and nameless entity that occurred throughout the articles and the dimensions of responsibilities, assigned agency to everyone and no one at the same time, due to the vagueness of who is included in this grand “we”. The way the main focus is put on us by addressing “we” or “humanity” does point out people at the same time as the individual isn’t directly addressed, resulting in no actual individualisation taking place. The way the individual may be affected by the consequences of biodiversity loss or what they can do to resolve it is also not always explicitly explained, which leads to ambiguity of who needs to act and how. This may result in diffusion of responsibility. However, as Shreedhar and Thomas-Walters (2022) observed, addressing more actors than solely the individual may avoid responsibility diffusion and encourage policy support and behavioural intention.



Who is ascribed agency in the "we", can to a certain extent be determined by inferring who the actions are targeted at. Discussions on how we need to invest in biodiversity friendly infrastructure implies that investors need to take responsibility, while the need to change the agricultural system implies that the food producers, policy makers and consumers need to act.

In a few instances, responsabilisation of the individual took place through personalisation as consumers consumption was targeted and consumers urged to change their behaviours. Citizens were also encouraged to civic participation to bring about political and systemic change. Consumption was, however, not always mentioned on a personalised level, but on a societal level. Consumption was turned into a systemic problem, rather than one of individual responsibilities, in which no agency was assigned due to the lack of concrete actions.

## 5.2 The role of media

A possible explanation to why individualisation is low and the solutions vague, could be attributed to that the discourse on biodiversity is abstract. The abstraction may be due to biodiversity being a relatively new topic with no universal scientific definition, and up until recently had low coverage in the media. According to the database Nexis Uni, the number of newspaper articles mentioning "biodiversity", began to dramatically increase mid-2017, and by the end of 2023 this number had quadrupled. In addition, biodiversity is a complex issue, and low understanding of an issue's complexities naturally makes it harder to solve the issue efficiently.

How newspapers use biodiversity related language and categorises biodiversity related articles on their websites visualises the unclarity of the term. The Guardian used to publish articles on biodiversity under the category "biodiversity" on their website. However, on May 17th, 2019, The Guardian changed the language they use about the environment, for which they updated to include the use of "wildlife" rather than "biodiversity" (in Why the Guardian is changing the language it uses about the environment; From now, house style guide recommends terms such as "climate crisis" and "global heating"). On the Australian edition of The Guardian website, both "Wildlife" and "Biodiversity" can be found as sub-categories for the tab "Environment", with the sub-category "Wildlife" having substantially more articles than the one of "Biodiversity". For the UK, US, Europe, and International online editions only "Wildlife" can be found as a sub-category of "Environment". The style change was triggered by the Guardian wanting to be accurate in their descriptions of environmental crises facing the world. Compared to other terms that were changed, such as "climate change" to "climate emergency" to better illustrate the catastrophe that is facing humanity, the changing of terms from "biodiversity" to "wildlife" can be argued to be rather limiting as "biodiversity" includes a broader definition of variability within nature (Jetzkowitz et al., 2017) than what "wildlife" does. Comparing this to websites of The Times and The Independent, The Times has a section called "Environment" with the sub-category "Nature", and The Independent publishes articles about biodiversity under "Climate". Whether this has an effect on the readers is outside the scope of this study,

but the use of the term “biodiversity” (or lack thereof) tells something about the discourse of biodiversity in media.

The fact that the term “biodiversity” has been updated and that it is grouped with other environmental issues suggests that its societal and global impact is not given the same level of attention as climate change. By not writing about biodiversity, salience is not given, which may have an effect on the readers’ perceived importance of the issue. Nevertheless, newspaper publications on biodiversity have increased, which indicates that while The Guardian may have changed their recommended terminology and “biodiversity” not being a category on the newspaper’s websites, the interest to report on biodiversity has increased. As McCombs and Shaw (1972) observed, increased media attention to an issue can heighten the perceived importance among readers. Therefore, greater salience given to biodiversity in the media may lead to greater awareness of its significance.

Not mentioning the individual in the biodiversity discourse is interesting since Kristiansen et al. (2020) found that individual actions were commonly referred to in media discourse on livestock production and climate change. Biodiversity loss has been an active issue for a long time, just as climate change, and both are abstract phenomena that are hard to witness as they are happening. One hypothesis for why biodiversity has drawn less attention, and perhaps lower individual responsabilisation, is that biodiversity is not presented as pressing as climate change or other environmental issues. Discussions on climate change have increasingly entered social and political discourse while biodiversity remain a diffuse term to many people. Perhaps this is what The Guardian aimed at with their change to wildlife, as this term is something more people can be expected to have a concept of. As Legagneux et al. (2018) theorised, the choice of keywords could indeed be an inherent problem in the biodiversity discourse, hindering both understanding of the concept of biodiversity as well its significance to the public.

Due to the media having a substantial influence on societal perception and discourses, it can be argued that the media has a responsibility towards the audience and society to consider how they frame biodiversity and responsibilities, making media discourse analysis an important research topic. The media is a messenger and it could be argued that individuals are responsible for their own learning and understanding of the world. However, the individual may be dependent on the media as a source of information to base their knowledge on. This creates a dependency in which the larger actor (in this case the media) has a responsibility towards the individual. The media plays an important role in mass communication, so to minimise the importance of how the media frames issues and responsibility is damaging to a democratic society. One of the media’s responsibilities is to inform the public, which means that their responsibility is to the individual. However, considering that many media outlets are run as independent businesses, it is important to remember that in a neoliberal society, businesses are expected to self-realise themselves, which for a business often means to grow and increase their market value, and while doing so make moral choices in relation to other actors on the market. If the market demands entertainment, the media may then be responsible to give what is requested of them to balance the market and act in their own self-interest.

Further, how the media portrays biodiversity reflects the societal discourse. A discourse is bigger than a newspaper's depiction of an issue, resulting in that if the societal discourse is abstract, the media discourse may be so as well. That the media discourse on biodiversity is vague may therefore be due to the fact that the biodiversity discourse in society is vague. To clarify the media discourse, a consensus of the scientific definition of biodiversity, that incorporates social sciences, humanities and ethics (Jetzkowitz et al., 2017), may be needed as well as an increase interest from all levels of society to understand and communicate about biodiversity, contributing to a clarification in the societal discourse on biodiversity.

### 5.3 Limitations

There are some limitations of this study that needs to be considered. Firstly, the news articles were coded by a single coder and were each coded once. This means that intercoder reliability could not be assessed. To alleviate this short coming, the quotations within each code were re-evaluated and recoded if necessary to ensure consistent interpretation of the codes.

The definition of biodiversity and inclusion criteria during data selection was broad, including articles that primarily discussed issues that are related to biodiversity but vaguely so. For example, articles about mining were accepted if they adequately mentioned the effect that the mine would have on biodiversity. The actors were then coded based on their role in the issue at hand. This affected the analysis of actor involvement in biodiversity, as several quotes do not mention biodiversity and instead, for example, mentions climate change. A separation of individual responsabilisation for biodiversity loss and for climate change was therefore difficult and not exclusive.

Lastly, the data set was limited to a two-month period. The insight on the topic is therefore limited to a short time period in 2019. Although the data was rich, a longer timeframe would have allowed deeper understanding of the effects of the report on biodiversity reporting and individual responsabilisation in media.

### 5.4 Future research

Future research can examine the effect of using words such as "we", "us", and "humanity" in the media when framing responsibility of a societal issue. Understanding if the use of these terms encourages societal support or leads to responsibility diffusion, or has other effects, is beneficial when communicating the need for action.

Additionally, further research can study whether the responsabilisation of actors has changed since the large increase in how often media mentions biodiversity. Also, studies to evaluate how the public perceive the term biodiversity, what the public knows of biodiversity and the salience of the term in the public mind is needed to better understand how biodiversity loss as a societal issue can be communicated.

## 5.5 Positionality

In the spirit of self-reflexivity, I acknowledge my background as a consumer studies student. I am highly aware of and knowledgeable about sustainability. I am aware of the influence that my positionality may have had on this project. My understanding of biodiversity and related sustainability issues may have influenced how I selected articles and coded. My consumer science perspective and the fact that this is my master thesis in the subject, contributed to me emphasising the consumer rather than other individual actors.

## 5.6 Conclusion

This study aimed at filling the research gap by answering how responsabilisation of actors was framed in media's discourse on biodiversity, with a specific focus on individualisation. The study found contrasting result to previous studies. The results show that the primary responsibility is assigned on a systemic level to the grand "we" and humanity. In a few instances, the individual is assigned responsibility through personalisation, but more often through capabilisation as governments are urged to implement policy changes with the end goal of system change.

Media influences public perception of societal issues and therefore has a responsibility toward the audience and society when reporting on biodiversity. However, biodiversity remains an abstract phenomenon with the consequence of an abstract and vague media and societal discourse. Despite this abstraction, the interest in biodiversity is increasing and attempts are being made to make biodiversity less abstract.

With this new insight of the limited occurrence of individualisation in the media's biodiversity discourse, future research can collect further insights of how the current system level focused discourse influences the audience.

# References

- Begg, C., Ueberham, M., Masson, T., & Kuhlicke, C. (2017). Interactions between citizen responsabilization, flood experience and household resilience: insights from the 2013 flood in Germany. *International journal of water resources development*, 33(4), 591-608. <https://doi.org/10.1080/07900627.2016.1200961>
- Boukes, M. (2022). Episodic and thematic framing effects on the attribution of responsibility: The effects of personalized and contextualized news on perceptions of individual and political responsibility for causing the economic crisis. *The International Journal of Press/Politics*, 27(2), 374-395. <https://doi.org/10.1177/1940161220985241>
- Brunet, N. D., Dagenais, D., Breux, S., & Handa, I. T. (2020). A characterization of media representation of biodiversity and implications for public perceptions and environmental policy: the case of Québec, Canada. *Environment, Development and Sustainability*, 22, 1655-1669. <https://doi.org/10.1007/s10668-018-0244-6>
- Buijs, A., Kamphorst, D., Mattijssen, T., Van Dam, R., Kuindersma, W., & Bouwma, I. (2022). Policy discourses for reconnecting nature with society: The search for societal engagement in Dutch nature conservation policies. *Land Use Policy*, 114, 105965. <https://doi.org/10.1016/j.landusepol.2021.105965>
- Carrington, M., Chatzidakis, A., Goworek, H., & Shaw, D. (2021). Consumption ethics: A review and analysis of future directions for interdisciplinary research. *Journal of Business Ethics*, 168, 215-238. <https://doi.org/10.1007/s10551-020-04425-4>
- Chevallier, A., González-Roca, F., Portflitt-Toro, M., Fortt, J. A., Luna, N., Cerda, O., ... & Gaymer, C. F. (2019). National trends in the biodiversity interest in digital media. *Environmental Science & Policy*, 101, 106-115. <https://doi.org/10.1016/j.envsci.2019.08.005>
- Dana, J., Weber, R. A., & Kuang, J. X. (2007). Exploiting moral wiggle room: experiments demonstrating an illusory preference for fairness. *Economic Theory*, 33, 67-80. <https://doi.org/10.1007/s00199-006-0153-z>
- Dong, Y., Hu, S., & Zhu, J. (2018). From source credibility to risk perception: How and when climate information matters to action. *Resources, Conservation and Recycling*, 136, 410-417. <https://doi.org/10.1016/j.resconrec.2018.05.012>
- Döbbe, F., & Cederberg, E. (2023). “Do something simple for the climate”: How collective counter-conduct reproduces consumer responsabilization. *Journal of Business Ethics*, 1-17. <https://doi.org/10.1007/s10551-023-05444-7>

- Ehgartner, U. (2018). Discourses of the food retail industry: Changing understandings of ‘the consumer’ and strategies for sustainability. *Sustainable Production and Consumption*, 16, 154-161. <https://doi.org/10.1016/j.spc.2018.08.002>
- Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43, 51–59. <https://doi.org/10.1111/j.1460-2466.1993.tb01304.x>
- Evans, D., Welch, D., & Swaffield, J. (2017). Constructing and mobilizing ‘the consumer’: Responsibility, consumption and the politics of sustainability. *Environment and Planning A*, 49(6), 1396-1412. <https://doi.org/10.1177/0308518X17694030>
- Giesler, M., & Veresiu, E. (2014). Creating the responsible consumer: Moralistic governance regimes and consumer subjectivity. *Journal of Consumer Research*, 41(3), 840-857. <https://doi.org/10.1086/677842>
- Gollnhofer, J. F., & Kuruoglu, A. P. (2020). Makeshift markets and grassroots reponsibilization. In *Bridging Boundaries in Consumption, Markets and Culture* (pp. 7-28). Routledge. <https://doi.org/10.1080/10253866.2018.1462171>
- Hammett, D., & Staeheli, L. A. (2011). Respect and responsibility: Teaching citizenship in South African high schools. *International Journal of Educational Development*, 31(3), 269-276. <https://doi.org/10.1016/j.ijedudev.2010.06.011>
- Harvey, F. (2019, May 6). *Biodiversity: what the UN has found and what it means for humanity*. The Guardian. <https://www.theguardian.com/environment/2019/may/06/biodiversity-what-the-un-has-found-and-what-it-means-for-humanity>
- van Hooft, J., Patterson, C., Löf, M., Alexandrou, C., Hilton, S., & Nimegeer, A. (2018). Media framing and construction of childhood obesity: a content analysis of Swedish newspapers. *Obesity science & practice*, 4(1), 4-13. <https://doi.org/10.1002/osp4.150>
- International Institute for Sustainable Development (2019, February 12). *IPBES Previews 2019 Global Assessment Report on Biodiversity*. <https://sdg.iisd.org/news/ipbes-previews-2019-global-assessment-report-on-biodiversity/>
- International Telecommunication Union (2017). *ICT Facts and Figures 2017*. [https://www.mcmc.gov.my/skmmgovmy/files/attachments/Results\\_of\\_the\\_CPM11-1\\_Report%20\\_CA171\\_.pdf](https://www.mcmc.gov.my/skmmgovmy/files/attachments/Results_of_the_CPM11-1_Report%20_CA171_.pdf)
- IPBES (2019). *Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. S. Díaz, J. Settele, E. S. Brondízio, H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razzaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany. 56 pages. <https://doi.org/10.5281/zenodo.3553579>

- Iyengar S. (1991). *Is anyone responsible? How television frame political issues*. Chicago, IL: The University of Chicago Press.
- Jetzkowitz, J., Van Koppen, C. S. A., Lidskog, R., Ott, K., Voget-Kleschin, L., & Wong, C. M. L. (2018). The significance of meaning. Why IPBES needs the social sciences and humanities. *Innovation: The European Journal of Social Science Research*, 31(sup1), S38-S60. <https://doi.org/10.1080/13511610.2017.1348933>
- Jeong, S. H., Yum, J., & Hwang, Y. (2018). Effects of media attributions on responsibility judgments and policy opinions. *Mass Communication and Society*, 21(1), 24-49. <https://doi.org/10.1080/15205436.2017.1362002>
- Keum, H., Devanathan, N., Deshpande, S., Nelson, M. R., & Shah, D. V. (2004). The citizen-consumer: Media effects at the intersection of consumer and civic culture. *Political Communication*, 21(3), 369-391. <https://doi.org/10.1080/10584600490481479>
- Kim, S. H. (2015). Who is responsible for a social problem? News framing and attribution of responsibility. *Journalism & Mass Communication Quarterly*, 92(3), 554-558. <https://doi.org/10.1177/1077699015591956>
- Kipp, A., & Hawkins, R. (2019). The responsabilization of “development consumers” through cause-related marketing campaigns. *Consumption Markets & Culture*, 22(1), 1-16. <https://doi.org/10.1080/10253866.2018.1431221>
- Kothe, E. J., Ling, M., North, M., Klas, A., Mullan, B. A., & Novoradovskaya, L. (2019). Protection motivation theory and pro-environmental behaviour: A systematic mapping review. *Australian Journal of Psychology*, 71(4), 411-432. <https://doi.org/10.1111/ajpy.12271>
- Kristiansen, S., Painter, J., & Shea, M. (2021). Animal agriculture and climate change in the US and UK elite media: volume, responsibilities, causes and solutions. *Environmental communication*, 15(2), 153-172. <https://doi.org/10.1080/17524032.2020.1805344>
- Kogut, T., & Ritov, I. (2005). The singularity effect of identified victims in separate and joint evaluations. *Organizational behavior and human decision processes*, 97(2), 106-116. <https://doi.org/10.1016/j.obhdp.2005.02.003>
- Kutaula, S., Gillani, A., Gregory-Smith, D., & Bartikowski, B. (2024). Ethical Consumerism in Emerging Markets: Opportunities and Challenges. *Journal of Business Ethics*, 1-23. <https://doi.org/10.1007/s10551-024-05657-4>
- Legagneux, P., Casajus, N., Cazelles, K., Chevallier, C., Chevris, M., Guéry, L., ... & Gravel, D. (2018). Our house is burning: discrepancy in climate change vs. biodiversity coverage in the media as compared to scientific literature. *Frontiers in Ecology and Evolution*, 5, 297310. <https://doi.org/10.3389/fevo.2017.00175>
- Lineman, M., Do, Y., Kim, J. Y., & Joo, G. J. (2015). Talking about climate change and global warming. *PLoS one*, 10(9), e0138996. <https://doi.org/10.1371/journal.pone.0138996>

- Livingstone, S., & Markham, T. (2008). The contribution of media consumption to civic participation 1. *The British journal of sociology*, 59(2), 351-371. <https://doi.org/10.1111/j.1468-4446.2008.00197.x>
- Macdonald, C., McEntee, K., & Wester, J. (2023). Values, attitudes, and media exposure: Public perception of sharks and shark conservation in the USA. *Biological conservation*, 286, 110305. <https://doi.org/10.1016/j.biocon.2023.110305>
- Maniates, M. F. (2001). Individualization: Plant a tree, buy a bike, save the world?. *Global environmental politics*, 1(3), 31-52. <https://doi.org/10.1162/152638001316881395>
- Manzoor, H., Saeed, S., & Panhwar, A. H. (2019). Use of discourse analysis in various disciplines. *International Journal of English Linguistics*, 9(3), 301-309. <https://doi.org/10.5539/ijel.v9n3p301>
- McCombs, M. E., & Shaw, D. L. (1972). The agenda-setting function of mass media. *Public opinion quarterly*, 36(2), 176-187. <https://doi.org/10.1086/267990>
- Moy, P., & Bosch, B. (2013). Theories of Public Opinion. In P. Cobley & P. Schultz (Eds.), *Handbook of Communication Science: Theories and Models of Communication* (pp.289–308). Berlin: De Gruyter Mouton <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1251&context=sociologyfcpub>
- Neuman, W.R., Just, M.R., & Crigler, A.N. (1992). *Common knowledge*. Chicago: University of Chicago press.
- Niemiec, R., Berl, R. E., Gonzalez, M., Teel, T., Salerno, J., Breck, S., ... & Crooks, K. (2022). Rapid changes in public perception toward a conservation initiative. *Conservation Science and Practice*, 4(4), e12632. <https://doi.org/10.1111/csp2.12632>
- Orste, L., Krumina, A., Kilis, E., Adamsone-Fiskovica, A., & Grivins, M. (2021). Individual responsibilities, collective issues: The framing of dietary practices in Latvian media. *Appetite*, 164, 105219. <https://doi.org/10.1016/j.appet.2021.105219>
- Papworth, S. K., Nghiem, T. P. L., Chimalakonda, D., Posa, M. R. C., Wijedasa, L. S., Bickford, D., & Carrasco, L. R. (2015). Quantifying the role of online news in linking conservation research to Facebook and Twitter. *Conservation Biology*, 29(3), 825-833. <https://doi.org/10.1111/cobi.12455>
- Pyysiäinen, J., Halpin, D., & Guilfoyle, A. (2017). Neoliberal governance and ‘responsibilization’ of agents: reassessing the mechanisms of responsibility-shift in neoliberal discursive environments. *Distinktion: Journal of Social Theory*, 18(2), 215-235. <https://doi.org/10.1080/1600910X.2017.1331858>
- Reinecke, S., & Blum, M. (2018). Discourses across scales on forest landscape restoration. *Sustainability*, 10(3), 613. <https://doi.org/10.3390/su10030613>



- Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F. S., Lambin, E. F., ... & Foley, J. A. (2009). A safe operating space for humanity. *Nature*, 461(7263), 472-475. <https://doi.org/10.1038/461472a>
- Scheufele, D. A. (1999). Framing as a theory of media effects. *Journal of communication*, 49(1), 103-122. <https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1460-2466.1999.tb02784.x>
- Semetko, H. A., & Valkenburg, P. M. (2000). Framing European politics: A content analysis of press and television news. *Journal of communication*, 50(2), 93-109. <https://doi.org/10.1111/j.1460-2466.2000.tb02843.x>
- Shamir, R. (2008). The age of responsabilization: On market-embedded morality. *Economy and society*, 37(1), 1-19. <https://doi.org/10.1080/03085140701760833>
- Shreedhar, G., & Thomas-Walters, L. (2022). Experimental evidence of the impact of framing of actors and victims in conservation narratives. *Conservation Biology*, 36(6), e14015. <https://doi.org/10.1111/cobi.14015>
- Staeheli, L. A., & Hammett, D. (2010). Educating the new national citizen: Education, political subjectivity and divided societies. *Citizenship Studies*, 14(6), 667-680. <https://doi.org/10.1080/13621025.2010.522353>
- Publishers Audience Measurement Company (2021). *Monthly reach of The Times and The Sunday Times in the United Kingdom from April 2019 to March 2020, by demographic group (in 1,000s)* [Graph]. In Statista. Retrieved May 27, 2024, from <https://www.statista.com/statistics/380755/the-times-newspapers-monthly-reach-by-demographic-uk/>
- Small, D. A., & Loewenstein, G. (2003). Helping a victim or helping the victim: Altruism and identifiability. *Journal of Risk and uncertainty*, 26, 5-16. <https://doi.org/10.1023/A:1022299422219>
- Swingland, I. R. (2001). Biodiversity, definition of. *Encyclopedia of biodiversity*, 1, 377-391. <https://doi.org/10.1016/B0-12-226865-2/00027-4>
- Takala, T., Hujala, T., Tanskanen, M., & Tikkanen, J. (2019). Competing discourses of the forest shape forest owners' ideas about nature and biodiversity conservation. *Biodiversity and Conservation*, 28, 3445-3464. <https://doi.org/10.1007/s10531-019-01831-7>
- Temmann, L. J., Wiedicke, A., Schaller, S., Scherr, S., & Reifegerste, D. (2021). A systematic review of responsibility frames and their effects in the health context. *Journal of Health Communication*, 26(12), 828-838. <https://doi.org/10.1080/10810730.2021.2020381>
- The Guardian Advertising (n.d.). *Our audience. The Guardian attracts a unique group of people*. The Guardian, US. Retrieved January 29, 2024, from <https://advertising.theguardian.com/us/advertising/audience>

- The Independent Advertising (2022). *The Independent retains its title of the UK's biggest quality digital news brand*. The Independent, UK. <https://www.independentadvertising.com/the-independent-retains-its-title-of-the-uks-biggest-quality-digital-news-brand/>
- Tittensor, D. P., Walpole, M., Hill, S. L., Boyce, D. G., Britten, G. L., Burgess, N. D., ... & Ye, Y. (2014). A mid-term analysis of progress toward international biodiversity targets. *Science*, 346(6206), 241-244. <https://doi.org/10.1126/science.1257791>
- Trnka, S., & Trundle, C. (2014, April). Competing responsibilities: Moving beyond neoliberal responsibilisation. In *Anthropological Forum* (Vol. 24, No. 2, pp. 136-153). Routledge. <https://doi.org/10.1080/00664677.2013.879051>
- van Hulst, M., Metze, T., Dewulf, A., De Vries, J., Van Bommel, S., & Van Ostaijen, M. (2024). Discourse, framing and narrative: three ways of doing critical, interpretive policy analysis. *Critical Policy Studies*, 1-23. <https://doi.org/10.1080/19460171.2024.2326936>
- Vysotska, O. Y., & Vysotskyi, O. Y. (2022). Green consumer culture as a factor of sustainable development of society. *Journal of Geology, Geography and Geoecology*, 31(1), 171-185. <https://doi.org/10.15421/112217>
- Västfjäll, D., Slovic, P., Mayorga, M., & Peters, E. (2014). Compassion fade: Affect and charity are greatest for a single child in need. *PloS one*, 9(6), e100115. <https://doi.org/10.1371/journal.pone.0100115>
- Zhao, M., Rosoff, H., & John, R. S. (2019). Media disaster reporting effects on public risk perception and response to escalating tornado warnings: A natural experiment. *Risk analysis*, 39(3), 535-552. <https://doi.org/10.1111/risa.13205>

# Appendix A: Code book

Theme	Code	Explanation	Examples	Type
Actors	We & Humanity	References made to humans across generations.	"we", "us", "humanity", "human(s)", "since the arrival of people", "future generations of people"	Inductive
	Businesses, institutes, public figures, NGOs, charities	References to organisations or prominent people known to the public (excl. politicians).	"United Nations", "Irish Wildlife Trust", "businesses", "IPBES", "supermarkets"	Deductive
	Governments, policy makers, politicians	References to countries, political entities and individuals and policy makers.	"the government", "politicians in Europe", "ministers", "Britain"	Deductive
	Systems	References to societal systems and industries.	"the economic system", "agricultural system", "the agricultural industry"	Inductive
	Groups	References to professional groups, philosophical belonging, lobbyist groups.	"naturalists", "environmentalists", "farmers", "scientists", "landowners", "extinction rebellion", "experts"	Inductive
	The individual	References to the current everyday individual person. The reader may be addressed directly, or individual actions are mentioned.	"consumers", "tourists", "citizens", "the public", "homeowners", "children" "Thinking and acting green is a win for everybody: including you", "individual choice matters"	Deductive
Cause and consequences	Action	The cause of the problem described.	"The primary cause is intensive farming, which destroys habitats and poisons insects."	Deductive
	Causes - Consumption	When the cause is consumption.	"The assessment highlights how nature is "at death's door" on a planet ravaged by rampant overconsumption and drowning in pollution, where up to a million species are at risk of being wiped out"	Inductive
	Actors affected	Actors presented as being affected by the consequences of the issue.	"Our destruction of biodiversity and ecosystem services has reached levels that threaten our wellbeing."	Deductive
	Actors responsible	Actors presented as being responsible for causing the issue and subsequently the consequences of the issue.	"A million species are at risk of extinction as a result of human activity, according to a United Nations report on biodiversity."	Deductive
Solution	Actors responsible	Actors presented as being responsible of working out and/or realise a solution to the issue.	"It said that the government should tell Bord na Móna, the semistate energy company, to rehabilitate and "rewild" all of the bogs it owns."	Deductive

Changed consumption	Suggested solution is to consume something, consume differently, stop consuming. Includes changes in infrastructure, regulations, businesses, subsidies/tax that will influence consumption.	“Until fishing is properly regulated and contained, we should withdraw our consent. Save your plastic bags by all means, but if you really want to make a difference, stop eating fish.”	Deductive
Civic participation	Suggested solution is civic participation. Protest, educate, vote, come together as people. Includes governmental actions (see Consumption) that influences the populations possibilities of civic participation.	“The Greens are offering voters a real investment in protecting nature, and stronger environmental laws to help avert this crisis.”	Deductive
Policy changes	The suggested solution is a policy change.	“Rewilding Britain said more ambitious and expensive schemes for restoring habitats could be paid for with a nationwide carbon tax on emissions.”	Inductive
Systemic change	The suggested solution is a systemic change.	“But to do that, we must radically change the way we live, including how we use energy to power our societies, grow our food and manage our waste.”	Inductive
Specific solution	The solution is made explicit.	“Save your plastic bags by all means, but if you really want to make a difference, stop eating fish.”	Inductive
Other	Suggested solutions that do not fall into any of the other codes.	“Decisions by homeowners to feed wild birds can have a cumulative effect upon bird communities.”	Deductive

## Appendix B: News articles full list

Article	Publisher	Published
Loss of biodiversity is just as catastrophic as climate change Nature is being eroded at rates unpre	The Guardian	2019-05-06
Stop eating fish. It's the only way to save the life in our seas Unhindered by regulation, driven by	The Guardian	2019-05-09
UK urged to take lead on biodiversity as UN issues urgent warning Ministers announce report on econo	The Guardian	2019-05-06
We are full of bright ideas to solve ecological problems. So let's act on them There is hope in the	The Guardian	2019-05-06
Panic is setting in'_ Jayda G brings climate crisis home to fans DJ and producer wants to banish 'd	The Guardian	2019-05-21
Bio-manipulation to restore clear waters of Norfolk Broads Conservationists plan for removal of exce	The Guardian	2019-05-11
Rewild a quarter of UK to fight climate crisis, campaigners urge Subsidies to restore woodlands and	The Guardian	2019-05-21
Guardian spurs media outlets to consider stronger climate language Use of terms 'climate crisis' and	The Guardian	2019-05-24
Scotland faces climate 'apocalypse' without action to cut emissions Natural heritage chief warns of	The Guardian	2019-05-31
Shami Chakrabarti warns police over Extinction Rebellion prosecutions Shadow attorney general condem	The Guardian	2019-05-25
Wales scraps _1.4bn Gwent Levels M4 relief road scheme Environmentalists welcome move but business l	The Guardian	2019-06-04
Action now'_ the farmers standing up against 'wilful ignorance' on climate The challenge for farmer	The Guardian	2019-07-01
Significant suffering'_ experts call for national plan to save wombats from mange The incoming envi	The Guardian	2019-06-17
So much that will be lost'_ concerns grow over plan to raise Warragamba dam wall Traditional custod	The Guardian	2019-07-01
World's biggest' youth-led conservation scheme begins in Wales Organisers say Penpont project will	The Guardian	2019-07-02
Ammonia pollution damaging more than 60% of UK land - report Study finds most sensitive plant and wi	The Guardian	2019-06-18
Angus Taylor met with environment department even as it investigated company he part-owns Exclusive_	The Guardian	2019-06-19
Angus Taylor says meeting attended by land-clearing investigator had nothing to do with case Exclusi	The Guardian	2019-06-26
At 68, my climate activism made me a criminal. But I refuse to give up Extinction Rebellion has give	The Guardian	2019-06-26
Boris Johnson failed to protect biodiversity hotspot, says UN expert Ocean advocate highlights lack	The Guardian	2019-06-15

Can planting billions of trees save the planet_ Organisations from around the world are reforesting	The Guardian	2019-06-19
Coalition forced to explain conduct of Taylor and Frydenberg over endangered grasslands Guardian Aus	The Guardian	2019-07-04
Country diary_ the exquisite joy of a meadow full of flowers Grindon Moor, Staffordshire_ In a damag	The Guardian	2019-07-02
Fire, disease, people_ the native plants facing extinction - in pictures Discover Australia's threat	The Guardian	2019-06-24
Government urged to set up \$1bn fund to help farmers protect the environment Long-awaited review say	The Guardian	2019-06-27
Melissa Price approved uranium mine knowing it could lead to extinction of 12 species Exclusive_ for	The Guardian	2019-07-04
Minister grants woodlands protection after years of delay by predecessors Sussan Ley adds more plant	The Guardian	2019-06-28
National parks including Uluru and Kakadu not managed properly, audit finds Government agency has fa	The Guardian	2019-06-21
No flights, a four-day week and living off-grid_ what climate scientists do at home to save the plan	The Guardian	2019-06-29
Rainbow wormhole in the Tar Pits_ London's trippy pavilion moves to LA Second Home, a co-working spa	The Guardian	2019-06-16
Scotland 'at risk of losing environmental protection after Brexit' Campaigners urge Holyrood ministe	The Guardian	2019-06-26
Survival of natural world is in balance, says wildlife chief Ana Mar_a Hern_nde z says shifting socie	The Guardian	2019-06-24
Sussan Ley_ I'll be an environmentalist as minister MP says she's prepared to fight for her portfoli	The Guardian	2019-06-14
Tennis players find tranquility in Wimbledon's living walls The living walls employ state-of-the-art	The Guardian	2019-07-04
Toilet paper is getting less sustainable, researchers warn Major brands are using less recycled pape	The Guardian	2019-07-05
Tree planting 'has mind-blowing potential' to tackle climate crisis Research shows a trillion trees	The Guardian	2019-07-04
UK flower-growing industry in full bloom and worth _121m Homegrown stems accounted for 14% of _865m	The Guardian	2019-06-13
We must not barter the Amazon rainforest for burgers and steaks The EU-Mercosur trade deal is good	The Guardian	2019-07-02
Your 50-year news report_ humanity is actually in good shape Daily headlines may be gloomy but in th	The Guardian	2019-06-28
Elusive and cryptic' lizard may be first Australian mainland reptile declared extinct Hunt is on in	The Guardian	2019-05-24
Exterminator of the future'_ Brazil 's Bolsonaro denounced for environmental assault Activist and p	The Guardian	2019-05-09
Missing in action'_ hunt goes on for Coalition's invisible environment minister It's supposed to be	The Guardian	2019-05-10
Not adequate'_ experts rate Australian political response to extinction crisis Following the public	The Guardian	2019-05-07
The future of life on Earth lies in the balance' - a picture essay Almost 600 conservation experts	The Guardian	2019-05-07

414 million pieces of plastic found on remote island group in Indian Ocean Debris on Cocos (Keeling)	The Guardian	2019-05-16
Adani mine_ emails revealing pressure on CSIRO spark calls to review approval Agency had one afterno	The Guardian	2019-05-14
Adani refuses to commit to size of 'scaled-down' Carmichael coalmine Exclusive_ Company pursues appr	The Guardian	2019-05-07
Australia's biodiversity at breaking point - a picture essay Land clearing, deforestation, emissions	The Guardian	2019-05-15
Australia's political parties urged to act as UN panel issues grim extinction warning Environmental	The Guardian	2019-05-06
Australians overwhelmingly agree climate emergency is nation's No 1 threat Lowy poll showing two-thi	The Guardian	2019-05-08
Biodiversity_ what the UN has found and what it means for humanity The global assessment report pain	The Guardian	2019-05-06
Brumby lobby and conservationists urge NSW to reduce horrific collisions There were four crashes bet	The Guardian	2019-05-14
Climate change threatens 26 native species in Great Dividing Range, study finds Australian researche	The Guardian	2019-05-16
Coalition says it will consider breaking up Murray-Darling Basin Authority Productivity Commission r	The Guardian	2019-05-08
EU 'outright dangerous' in its use of natural resources, says WWF About 2.8 planets would be needed	The Guardian	2019-05-09
EU clean water laws under attack from industry lobbyists Mining, farming and hydropower sectors aim	The Guardian	2019-05-15
Has the politics of climate change finally reached a tipping point_ People increasingly see the environment	The Guardian	2019-05-15
Human society under urgent threat from loss of Earth's natural life Scientists reveal 1 million spec	The Guardian	2019-05-06
Inside the nature zone_ New Zealand's major museum investment is an urgent call to action The immers	The Guardian	2019-05-10
Merkel_ Europe must unite to stand up to China, Russia and US German chancellor also shares views on	The Guardian	2019-05-15
Most habitat clearing concentrated in just 12 federal electorates, study finds Scientists say the gr	The Guardian	2019-05-07
Only a third of world's great rivers remain free flowing, analysis finds Dams, levees, hydropower an	The Guardian	2019-05-08
Our obsession with growth is ruining the planet. A Green New Deal can save us If we want to head off	The Guardian	2019-05-10
Peter Garrett urges Bill Shorten to declare climate emergency if Labor wins Exclusive_ Former enviro	The Guardian	2019-05-09
PM says bill that mentions testing makeup on animals is 'action' on extinction crisis Scott Morrison	The Guardian	2019-05-09
PM's office silent after apparent reference to environment bill that doesn't exist Scott Morrison sa	The Guardian	2019-05-08
Raise taxes on firms that harm nature, OECD tells G7 countries Report calls for change of priorities	The Guardian	2019-05-07
Rare black bear seen in no-go zone between North and South Korea Find shows ecological value of demi	The Guardian	2019-05-10

Republicans aren't just climate deniers. They deny the extinction crisis, too Republican officials a	The Guardian	2019-05-23
Scientists fear impact of deep-sea mining on search for new medicines Bacteria from the ocean floor	The Guardian	2019-05-20
The climate change election_ where do the parties stand on the environment_ With the global and local	The Guardian	2019-05-12
The Guardian view on extinction_ time to rebel A million plant and animal species are under threat	The Guardian	2019-05-07
Tim Halliday obituary Ambassador for amphibians who warned of global decline	The Guardian	2019-05-13
UN environment warning_ 10 key points and what Australia must do From native species to Indigenous I	The Guardian	2019-05-07
We all smell the smoke, we all feel the heat. This environmental catastrophe is global Governments o	The Guardian	2019-05-17
Why the Guardian is changing the language it uses about the environment From now, house style guide	The Guardian	2019-05-17
Frightening' number of plant extinctions found in global survey Study shows 571 species wiped out,	The Guardian	2019-06-10
Why replace dolphins with oil drilling_'_ the battle for Greece 's marine life From sperm whales to	The Guardian	2019-06-07
Blue Mountains wilderness would be 'permanently' changed by raising dam wall, leak reveals Draft rep	The Guardian	2019-06-13
Cyprus begins lionfish cull to tackle threat to Mediterranean ecosystem Voracious fish are bleeding	The Guardian	2019-05-29
EU climate goals 'just a collection of buzzwords', say critics Document setting out agenda for next	The Guardian	2019-06-10
Forest twice size of UK destroyed in decade for big consumer brands - report Greenpeace estimates 50	The Guardian	2019-06-11
Land clearing up more than 50% in NSW even before new laws introduced Environment groups demand up t	The Guardian	2019-06-03
National Trust_ new roles announced to help restore habitats In a bid to bring back the natural beau	The Guardian	2019-05-24
Slow poison_ how Queensland government workers paid the price for fruit fly eradication Special inve	The Guardian	2019-06-03
To dye for_ Wrangler's new denim process eliminates water waste The US jeans brand has been working	The Guardian	2019-06-05
London to build seven-mile 'bee corridor' to boost dwindling numbers of pollinators More than 97 per	The Independent	2019-05-07
The Big Bad Wolf is misunderstood - so why do we fear its return to Britain _ Reintroducing the 'fear	The Independent	2019-05-08
Treat global nature declines as an emergency, scientists tell world leaders 'We need to declare an e	The Independent	2019-05-06
Dozens of bee species extinct or on verge of disappearing across UK	The Independent	2019-05-20
Climate 'apocalypse' to leave Scotland with abandoned villages, doomed forests and no birdsong within	The Independent	2019-05-30
Climate change is a clear and present danger for humanity - and the silence grows more deafening by	The Independent	2019-06-05
In Germany, the Greens are now a mainstream political force - and they will shape Europe's future T	The Independent	2019-05-28



Is genetic modification the future of fighting disease_ Analysis The benefits of gene editing are vanishing	The Independent	2019-05-30
Extinct' creatures found alive in 'lost city' deep within Honduras rainforest Conservation team dis	The Independent	2019-06-23
Africa must protect its natural wonders if the continent is to prosper African Union Commissioners	The Independent	2019-06-30
Communities living with wildlife demand they be the rightful owners' African countries unite in asking	The Independent	2019-06-30
Elephants are more than just the trade in ivory Saving Africa's elephants requires us to look beyond	The Independent	2019-07-05
Fish and chips under threat from climate change, study says larger sea creatures such as haddock and	The Independent	2019-06-17
Heathrow expansion_ what is the masterplan and what does it mean for passengers_ Simon Calder read t	The Independent	2019-06-18
Puerto Princesa Underground River_ Google Doodle celebrates stunning natural park in Philippines Cab	The Independent	2019-06-30
Time to place people at the heart of solving the wildlife crisis The people living with nature are in	The Independent	2019-06-23
We've all heard of a green new deal. But this is what it will actually look like Electric bus fleets	The Independent	2019-07-05
Zimbabwean President says sale of ivory stocks could fund conservation for 'next 20 years' The Head	The Independent	2019-06-24
Beavers being 'cruelly bludgeoned to death' despite full legal protection, campaigners say Ecologist	The Independent	2019-05-15
Climate change_ Why we need a fundamental shift in how we think about this crisis As part of a newco	The Independent	2019-05-24
Greta Thunberg says climate change message 'is clearly not getting through' 'We children say_ unite	The Independent	2019-05-07
Ireland becomes second country in the world after UK to declare 'climate emergency' 'Things will det	The Independent	2019-05-11
Major UK supermarkets 'buy corned beef from meat firm linked to illegal razing of Amazon rainforests	The Independent	2019-05-17
Mike Pompeo praises the effects of climate change on Arctic ice for creating new trade routes The Ar	The Independent	2019-05-06
Millions of songbirds vacuumed to death every year during Mediterranean olive harvest 2.6 million bi	The Independent	2019-05-16
Tropical forests 'empty' as illegal hunting slashes large mammal populations, study warns Key specie	The Independent	2019-05-14
World must undergo huge social and financial transformation to save future of human life, major repo	The Independent	2019-05-06
Amazon deforestation has risen by 20% this year, monitoring group warns Brazilian President Jair Bol	The Independent	2019-05-28
Creatures Great and Small The UN is right to highlight threats to biodiversity, but gets the solutio	The Times	2019-05-07
D_il agrees to take urgent action as it declares climate emergency	The Times	2019-05-10
Human activity has put a million species in danger, warns UN	The Times	2019-05-06
State 'must now declare a climate emergency' Million species face extinction globally, UN warns	The Times	2019-05-07

Western lifestyles must change to avoid catastrophe, warns UN	The Times	2019-05-07
Wild idea to expand biodiversity hotspot in Fens	The Times	2019-05-06
Bird feeders change garden pecking order	The Times	2019-05-22
Chinese smugglers killing off the pangolin China	The Times	2019-05-22
EU needs to defend climate and rights from reactionaries	The Times	2019-05-17
Green Party leader calls for end to dependence on oil and gas	The Times	2019-05-11
It's time to end our love affair with plastics, warns minister	The Times	2019-05-14
Landmark bee study asks for sightings	The Times	2019-05-24
Lawn Chorus Bird feeders have pulled off a minor miracle	The Times	2019-05-22
Nature notes Tomorrow is the [...]	The Times	2019-05-17
This is the climate change election, and it's a vital one Ciar_n Cuffe	The Times	2019-05-15
A meadow in your garden_ let your lawn grow wild Lawns don't need to be neat, says Joe Swift. Why no	The Times	2019-06-08
Birds flock back to rat-free Lundy	The Times	2019-05-28
Birds in Paradise The finches that inspired Darwin must be protected from a non-native parasite	The Times	2019-06-12
Farmers must work to take the heat out of the climate crisis Tom Bowser	The Times	2019-06-05
Green shoots took a long time to emerge	The Times	2019-05-30
Loch Lomond developer defends resort	The Times	2019-05-29
Oldest tree threatened by tourists seeking souvenirs	The Times	2019-05-29
Raab goes green to grow his support	The Times	2019-06-10
Return of elk 'could save the countryside'	The Times	2019-05-31
The eco-friendly midsummer makeover Stop power-washing patios and raking up leaves - a minimalist ap	The Times	2019-06-07
Welcome to the future of farming JAMES Vertical farms, with multistorey containers of food growing u	The Times	2019-06-08
Buddhists hope to end 'carnage' near retreat	The Times	2019-07-02
Expansion Rebellion The development of Heathrow should never have got the green light	The Times	2019-06-19
Farmers blame sea eagles for many lambs to the slaughter	The Times	2019-07-03
Meet the philanthropist tycoons making wild investment choices	The Times	2019-06-25
Planting woodlands may help Ireland meet greenhouse gas targets	The Times	2019-06-21
Precipitous Plunge The shrinking of Antarctic sea ice should concern everyone	The Times	2019-07-03
The best gardens can have their wild side Melissa Harrison Nature Notebook	The Times	2019-06-29
Colliery study strikes gold with new millipede species	The Times	2019-05-07
Home Truths The Irish Central Bank has warned that climate change will damage house prices and the e	The Times	2019-05-18
Macron draws on people power to turn France green	The Times	2019-05-20

Richard Morrison the arts column Our sanity depends on our parks, but their funding is in danger	The Times	2019-05-10
Sustainability and the rise of the treehouse	The Times	2019-05-24