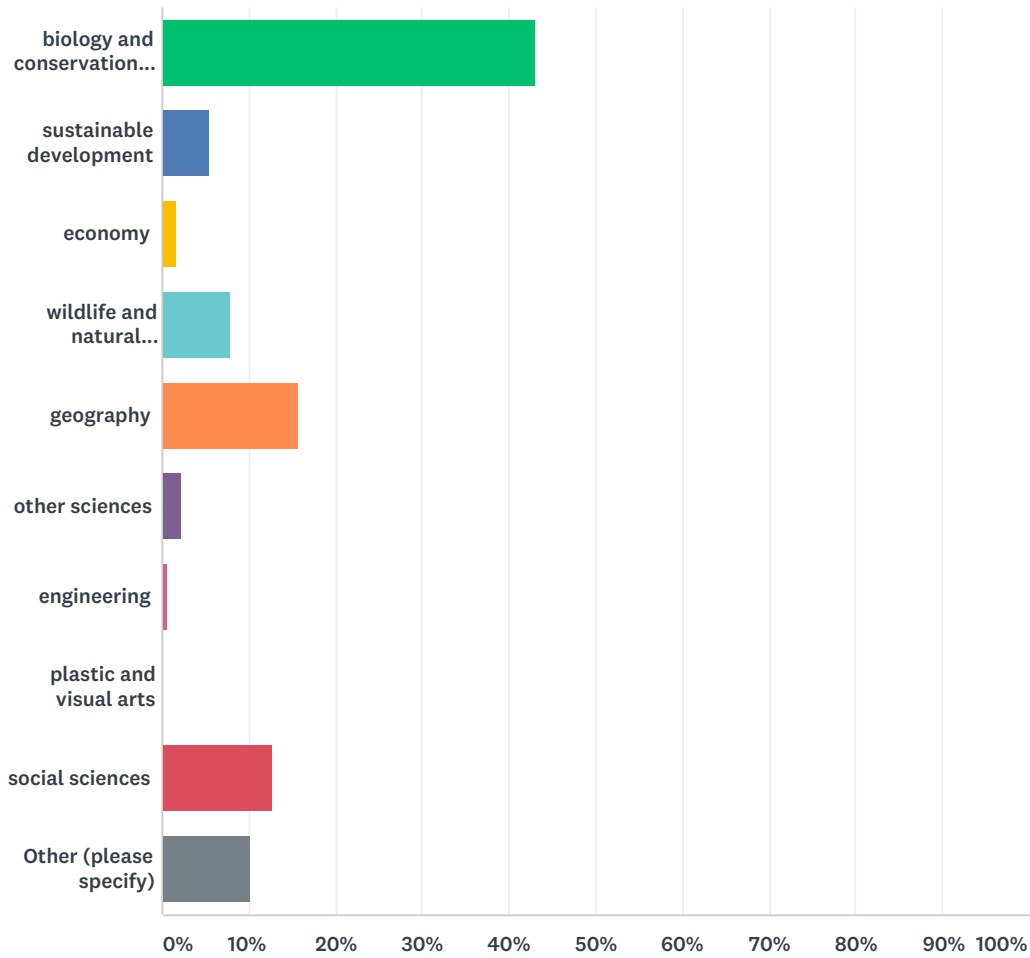


Q1 Your professional background is in which of the following fields?

Answered: 311 Skipped: 3

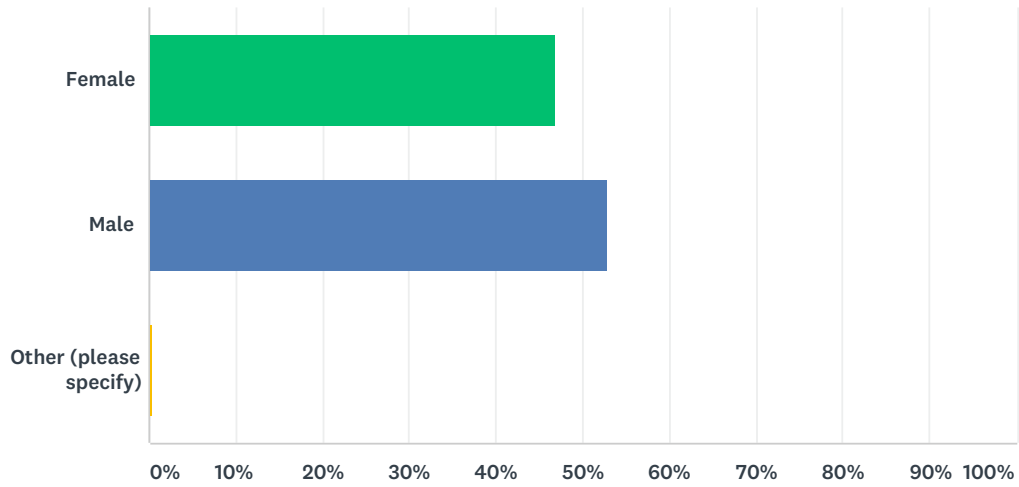


ANSWER CHOICES	RESPONSES	
biology and conservation biology	43.09%	134
sustainable development	5.47%	17
economy	1.61%	5
wildlife and natural resource management	8.04%	25
geography	15.76%	49
other sciences	2.25%	7
engineering	0.64%	2
plastic and visual arts	0.00%	0
social sciences	12.86%	40
Other (please specify)	10.29%	32
TOTAL		311

#	OTHER (PLEASE SPECIFY)	DATE
1	gardener at an university of applied studies	6/27/2018 5:18 PM
2	Environmental Science and Ecosystem management	6/18/2018 12:45 PM
3	IT	5/31/2018 10:23 AM
4	Geography phd and DVM (veterinary med)	5/25/2018 6:32 PM
5	Political ecology (transdisciplinary)	5/25/2018 2:49 PM
6	landscape management	5/23/2018 2:33 PM
7	1 2 and 4	5/23/2018 2:03 PM
8	gestion d'espaces verts communaux	5/23/2018 7:31 AM
9	forest science	5/22/2018 4:06 PM
10	Agriculture	5/22/2018 3:57 PM
11	Environmental biology and risk analysis of non-native species	5/22/2018 10:45 AM
12	Marine biology	5/22/2018 9:57 AM
13	native plant landscaper	5/21/2018 2:52 PM
14	economics, adult education	5/21/2018 9:13 AM
15	geology	5/21/2018 1:09 AM
16	weed science (agriculture) and invasive aliens	5/20/2018 3:50 PM
17	Environmental planning	5/20/2018 4:18 AM
18	Applied Ecology	5/19/2018 3:24 PM
19	environmental science	5/19/2018 3:24 AM
20	forest sciences	5/18/2018 9:59 PM
21	marine bioinvasions and ecology	5/18/2018 6:46 PM
22	biology, fisheries science and social science (interdisciplinary)	5/17/2018 6:06 PM
23	agriculture, soil science and environment	5/16/2018 8:21 PM
24	anthropology	5/16/2018 8:15 PM
25	natural resource management and social sciences	5/16/2018 6:42 PM
26	Biology, ecology, and anthropology	5/16/2018 4:08 PM
27	Several of the above (biology, development, geography, natural resources, social sciences	5/16/2018 3:19 PM
28	Social-ecological systems/resilience	5/10/2018 3:18 PM
29	Agronomy	5/9/2018 9:50 PM
30	Horticole	5/2/2018 1:02 PM
31	medical assistant	4/29/2018 8:40 PM
32	Legal	4/26/2018 8:44 PM

Q2 Your gender

Answered: 312 Skipped: 2

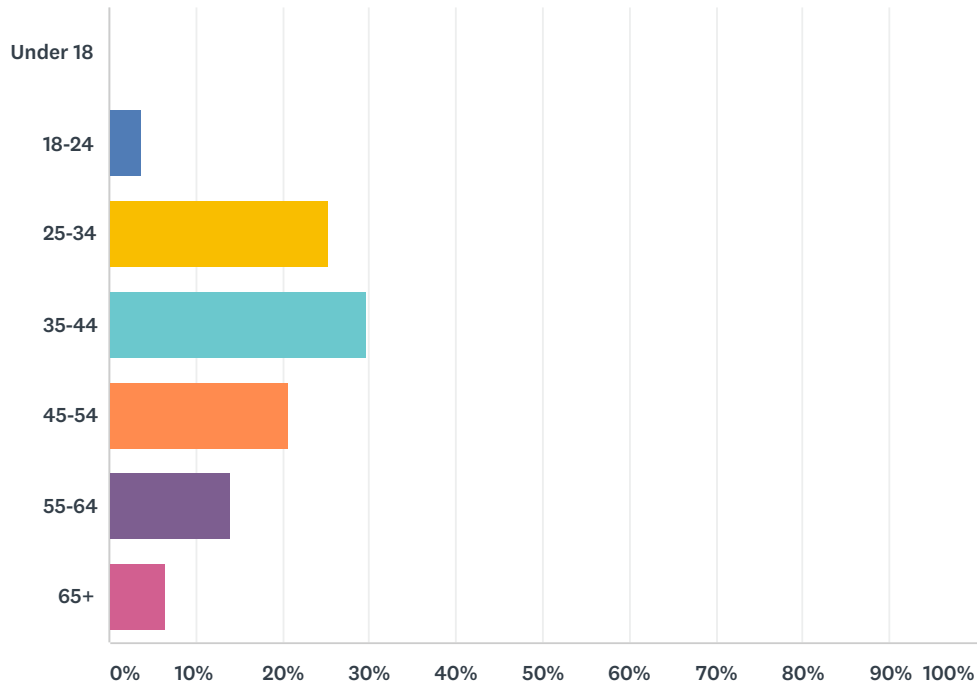


ANSWER CHOICES	RESPONSES
Female	46.79% 146
Male	52.88% 165
Other (please specify)	0.32% 1
TOTAL	312

#	OTHER (PLEASE SPECIFY)	DATE
1	none of this is binary ever	5/16/2018 5:59 PM

Q3 Your age

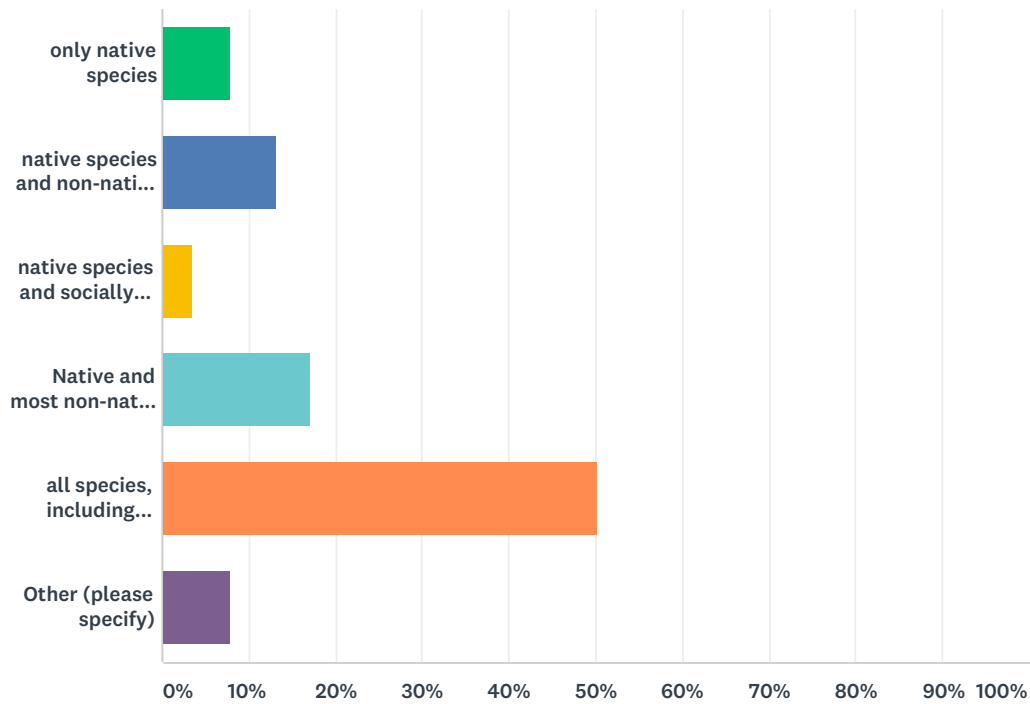
Answered: 313 Skipped: 1



ANSWER CHOICES	RESPONSES	
Under 18	0.00%	0
18-24	3.83%	12
25-34	25.24%	79
35-44	29.71%	93
45-54	20.77%	65
55-64	14.06%	44
65+	6.39%	20
TOTAL		313

Q4 In your opinion, which group(s) of species should be considered when quantifying the "species" dimension of biodiversity?

Answered: 313 Skipped: 1



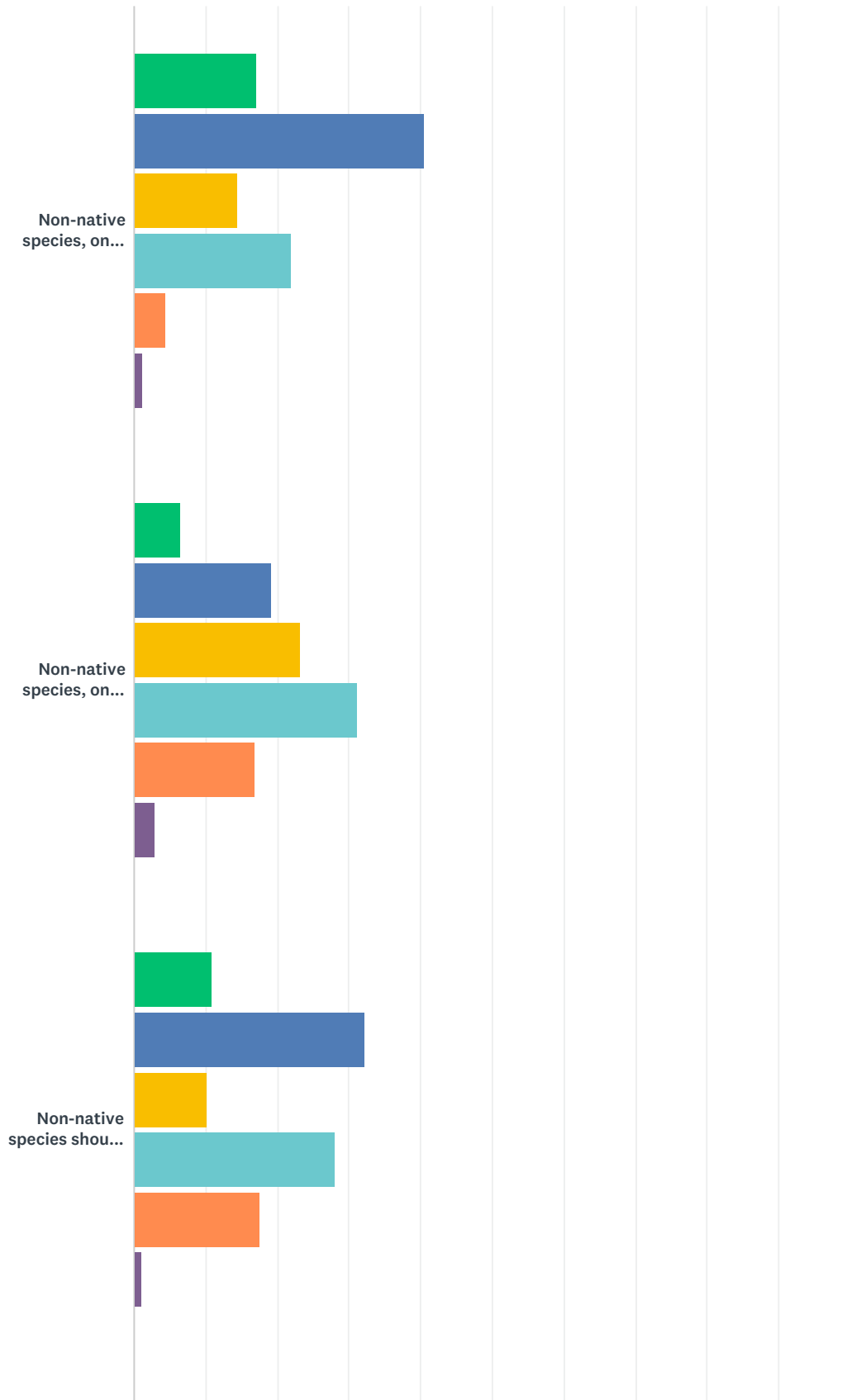
ANSWER CHOICES	RESPONSES	
only native species	7.99%	25
native species and non-native species that have been present for a "long time" (e.g., more than 100 years)	13.10%	41
native species and socially appreciated non-native species	3.51%	11
Native and most non-native species, but excluding invasive species	17.25%	54
all species, including non-native species, domesticated species and invasive species	50.16%	157
Other (please specify)	7.99%	25
TOTAL		313

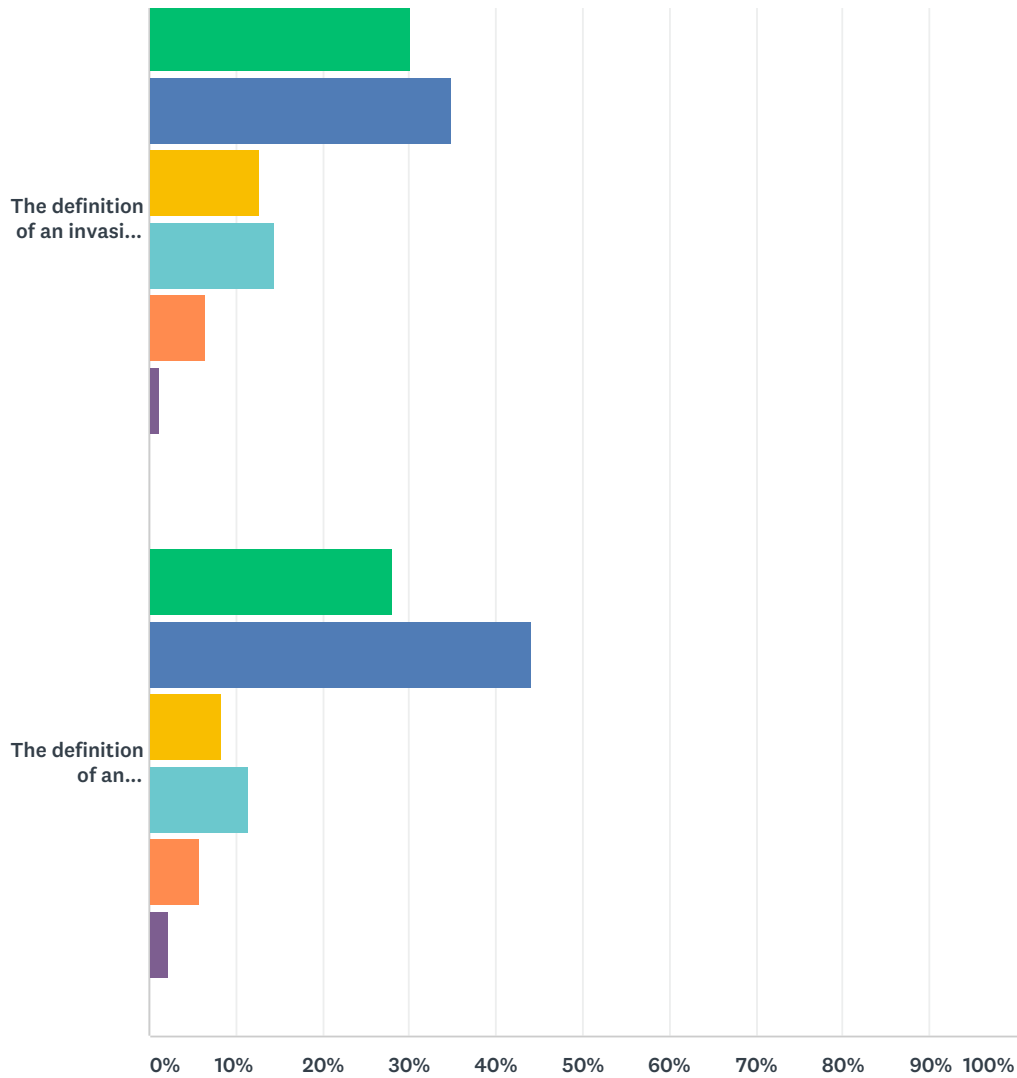
#	OTHER (PLEASE SPECIFY)	DATE
1	all species, including non- native species that survive freely in the wild (including invasive species)	6/26/2018 5:15 PM
2	all species,exclucing garden species or species in zoos	6/26/2018 4:25 PM
3	It should be distinguished which biodiversity you mean (alpha, beta, gamma) and what questions should be answered.	6/25/2018 10:39 AM
4	All species. depends on the scale of biodiversity that is being discussed. Introducing species on an island increases biodiversity in a quantifiable way, but may decrease global biodiversity if island-endemic species are lost	6/4/2018 8:10 PM
5	"Numeric" biodiversity indices may include alien spp. However, great care has to be taken in the interpretation: indices or native Biodiv are more indicative of "valuable" Biodiv	5/28/2018 12:06 AM
6	Leaning all species, but with some kind of caveat of context-specific functionality	5/27/2018 11:50 PM

7	depends on the ecosystem and questions being asked	5/26/2018 9:03 PM
8	Native species, and most non-native species that as socially appreciated, but excluding invasive species	5/25/2018 7:52 PM
9	It is more complicated than this because you really have to consider your "baselines" in terms of how "non-natives" are defined and how they may have been transferred to the present location. Dissemination by wildlife or wind or something is very different than massive afforestation with exotics in the name of aesthetics for example.	5/25/2018 6:32 PM
10	native species and compatible non-natives	5/25/2018 6:28 PM
11	All of them are valid depending the question being asked about biodiversity. For example to quantify the loss of beta diversity, all species should be considered.	5/25/2018 2:50 PM
12	I will refer to all species but consider differentiating between native and exotic (and considering occasional, naturalized, invasive,..). I would also take into account the environmental context (in urban landscapes alien species may be an important source of biodiversity, while it may be seen as more detrimental in protected landscapes)	5/24/2018 9:45 AM
13	that is an important question and the answer depends on how this index of biodiversity is going to be used	5/22/2018 4:18 PM
14	Native species for native biodiversity and all species for total biodiversity	5/22/2018 10:45 AM
15	Depends on the reason for quantifying biodiversity - all could be appropriate in different contexts	5/22/2018 2:01 AM
16	It depends on who is doing the quantification and for whom. If 'biodiversity' is understood a value laden concept, then these dimensions inform what is being measured and for what purpose.	5/21/2018 4:19 AM
17	Native species and species expanding their ranges in response to changing climate (could call them 'new natives'h	5/19/2018 11:23 AM
18	Perhaps the final option - as with changing climate - the communities of today will eventually not exist in the future as species continue to respond on an individual basis to changing conditions	5/18/2018 10:22 PM
19	X	5/18/2018 9:09 PM
20	All species, but differentiated as native, non-native, domesticated, invasive	5/18/2018 7:29 PM
21	both, but note the non-natives (invasive is subjective and not a term not favored by many marine non-native (nonindigenous) species. I would argue that biodiversity is more than species richness.	5/18/2018 6:46 PM
22	depends on context, no? of both rationale for quantification and environment. . .	5/16/2018 6:04 PM
23	all species, but being precise and making distinctions between types is also important	5/16/2018 5:59 PM
24	All of the above, but depending on the landscape	5/16/2018 3:43 PM
25	all species, including non-native species and invasive species	4/26/2018 11:31 AM

Q5 Please state your level of agreement with the following statements

Answered: 313 Skipped: 1





■ Strongly agree
 ■ Agree
 ■ Neutral
 ■ Disagree
 ■ Strongly disagree
 ■ I don't know or I don't understand the statement

	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE	I DON'T KNOW OR I DON'T UNDERSTAND THE STATEMENT	TOTAL
Non-native species, on average, represent a potential threat to the survival of native biodiversity	17.25% 54	40.58% 127	14.38% 45	22.04% 69	4.47% 14	1.28% 4	313
Non-native species, on average, represent a potential threat to human well-being	6.43% 20	19.29% 60	23.15% 72	31.19% 97	17.04% 53	2.89% 9	311
Non-native species should all be considered as potentially invasive species	10.86% 34	32.27% 101	10.22% 32	28.12% 88	17.57% 55	0.96% 3	313

Perception and valuation of non-native species

SurveyMonkey

The definition of an invasive species should be based on an evaluation of all its desirable and undesirable impacts (on native biodiversity, economy, or human health, social).	30.13% 94	34.94% 109	12.82% 40	14.42% 45	6.41% 20	1.28% 4	312
The definition of an "invasive" species should be based on at least one documented undesirable impact (on native biodiversity, economy, or human health, social)	27.97% 87	44.05% 137	8.36% 26	11.58% 36	5.79% 18	2.25% 7	311

Q6 In your view, what is the primary risk and the primary opportunity of including non-native species as part of biodiversity?

Answered: 280 Skipped: 34

#	RESPONSES	DATE
1	risk: negative effects on biodiversity.	9/4/2018 5:49 PM
2	Risks and opportunités are a human construct. Every species - either native or non-native - is part of biodiversity. Positive or negative evaluation is only created by human view.	7/23/2018 4:05 PM
3	The primary risk is the reduction in overall diversity if non-native species tend to reduce other species' ability to thrive. The opportunity is the value and inclusion of the range of DNA, adaptations, resources including aesthetics added to any community through new material and behavior.	7/17/2018 9:48 PM
4	risk: biodiversity / opportunity: realistic goals	7/17/2018 4:22 PM
5	Primary risk : Loss of native species leading to degradation and even collapse of ecosystems / Primary opportunity : Less money invested in fighting the invasive species.	7/7/2018 2:38 PM
6	risk: becoming a threat in future, as non-native species might become invasive after a certain time after establishing; opportunity: having a broader view of the threats and human-induced negative dynamics in ecosystems due to globalisation, intensive agriculture and habitat fragmentation which give species (more often non-natives but also native species!) a chance to become invasive	6/28/2018 3:57 PM
7	lost of/threat to native species; additional gen-pool	6/27/2018 5:18 PM
8	No risk. Opportunity: non-native species can contribute to ecosystem services (and often do so).	6/26/2018 7:59 PM
9	I see no risk, non-native species are a part of the biodiversity.	6/26/2018 7:55 PM
10	risk: the higher number of total species does not represent the biodiversity well. Opportunity: the immigration and introduction of non-native species is also a natural process. Including these species does not judge over species.	6/26/2018 5:15 PM
11	risk: dilution of potentially contradictory information about species, genetics, ecosystem dynamics, etc. Opportunity: more information to understand what is changing in the ecosystems.	6/26/2018 5:07 PM
12	each resource used by a non-native species is no longer available for native species.	6/26/2018 4:29 PM
13	Primary risk: Trends in total species richness are obscured (which are anyway often meaningless); Primary opportunity: Species composition will get again more in the focus of research and conservation	6/26/2018 4:25 PM
14	non native species are part of the global biodiversity, so why excluding them as part of the local biodiversity?	6/26/2018 4:02 PM
15	automatic acceptance, none	6/26/2018 3:40 PM
16	Primary risk is to 'mask' in the analyses the actual loss of biodiversity by including 'new' species that were not taken into account before (then weaken the message that we have to protect nature if we want to continue enjoying the services it provides). The opportunity is to have an assessment of biodiversity that is more 'flexible', more 'adaptive' and reflects better the dynamics of our (rapidly-changing) ecosystems	6/26/2018 10:27 AM
17	1. loss of beta and gamma diversity respectively the observation and detection of these; 2: saving finances	6/25/2018 10:39 AM
18	Primary risk would be putting equal value to native and non-native, which potentially threatens the native (lupin in Europe killing native roadside vegetation for example). Opportunity would be to actually include all the species within a community for the count, but I would be very cautious of adding non-natives without specifically mentioning the species of which the biodiversity consists of (x % of natives, y % non-natives, z % invasive non-natives etc.).	6/25/2018 12:21 AM
19	risk: exterminating other species, opportunity: may be this species' only chance of survival	6/21/2018 1:38 PM

20	risk: unknown impact on species competition/ disease spread. opp: missing out on a range of unseen benefits	6/18/2018 12:45 PM
21	Opportunity: more ethical conservation. No risk.	6/13/2018 3:04 PM
22	I do not really understand the question. I guess the risk is we start appreciating the invasive fragment and dilute the message of invasion threat. Second, biological valuation would have to be revisited. In my view non natives are part of biodiversity as much as natives only chances are higher something could go wrong (ie for them to become invasive) because of lack of coevolution	6/11/2018 6:38 PM
23	Risk of including invasive non-native species as part of biodiversity can lead to perverse effects in implementation of biodiversity legislation. Opportunities for non-invasive non-native species is that these can also be protected.	6/11/2018 10:41 AM
24	non-native species are mostly present in human modified environment so this type of habitat could be over-rated compared to natural habitat	6/7/2018 1:45 PM
25	The question is rather about what gets defined as "risk" (e.g., what are the contours of risk? Is it ecological, social, economic?) and whom does it affect (e.g., intra-species relations: nonhumans, humans, or combinations), or what are its cumulative effects? Questions of risk and value of often framed in economic terms; is this the best way to approach species' value?	6/6/2018 10:41 PM
26	risk = people turn their backs on native species if both native and non-native are seen as of equal 'value' (e.g. prefer to plant introduced rather than native crops and ornamental plants). opportunity = considers important ecosystem services provided by non-native species (e.g pollination by european honey bees in the new world)	6/4/2018 8:10 PM
27	risk: difficulty identifying original ecosystem; opportunity: recognition that ecosystems are dynamic and always changing, and that "native" is to some extent a social construct.	6/4/2018 7:20 PM
28	Risk - outcompeting native species, altering the ecosystem services provided. Opportunity - new food resources or potentially more efficient ecosystem services.	6/4/2018 10:57 AM
29	Risk: Potentially equates narrowly endemic, rare species with widespread, common species; Opportunity: more accurately represents reality, in terms of number of species in a location	6/1/2018 8:08 PM
30	Biodiversity includes all species that complement biodiversity as a whole (structural, functional, genetical). Also non-native species, that also enrich our environment and have been part especially in cultural landscapes for long times, are shaping what we consider biodiversity. So in culturally shaped environments (especially agricultural landscapes) non-native species can contribute to local biodiversity. In pristine ecosystem environments that are rather uninfluenced by human activity, non-native species have a higher risk on negatively influencing local biodiversity by becoming invasive.	6/1/2018 2:19 PM
31	Biodiversity in its broadest sense is a measure of the biota in a place. If it is a place overrun with invasives, then it stands to reason the overall measure of richness will decline. Separating out native from non-native is a false dichotomy. It also begs the question- what counts as native? How many years must past for native? What about plants that settle into a habitat and are not aggressive? Overall species richness and evenness seem like measurements that tell a more complete story than only counting native vs non-native.	6/1/2018 3:51 AM
32	Negative impacts on ecosystem services and biodiversity loss	5/31/2018 5:28 PM
33	Primary risk - Pose potential threat as invasive species to native biodiversity. Primary opportunity - If naturalised, they can support native biodiversity	5/31/2018 11:29 AM
34	I consider the risk that an increase in non-native species may obscure a decrease of native species populations if included.	5/31/2018 10:23 AM
35	Non-native species reduce and threaten biodiversity	5/31/2018 8:44 AM
36	The risk is that people think it's good to spread non-native species to "promote" or "increase" biodiversity. On the other hand, eg. old weeds and plants connected with human culture should be taken into account when evaluating and conserving biodiversity.	5/31/2018 8:12 AM
37	I think established non-natives should be counted to the number of species in an area because they are part of the community and ecosystem by then already, but what does the plain number of species tell us about the status of the ecosystem? We should consider functional diversity and the possible replacement of native species or even extinctions, thus the species number does not tell us much, in my opinion.	5/31/2018 7:36 AM

38	It is difficult enough to explain the general public the threat that invasive species as a threat to biodiversity	5/30/2018 2:59 PM
39	Primary risk– that some non-native species may put other species (native or otherwise) at risk of local declines or extinction, so although they may add to the total number of species (AKA biodiversity) at one given time, their longer-term effect may in fact be to "subtract" more species. Primary opportunity– I would not frame it exactly those terms, but if we are defining biodiversity as the total/numerical number of species in a given area, then it is odd to elevate one species over another.	5/30/2018 12:20 AM
40	risk: slippery slope - where do you draw the line between recent &/or invasive introductions and long-standing ones? Most non-native spp present outside their range are presumed to have a relatively wide distribution and are therefore not endangered by environmental change and development. Of course migration due to climate change has to be taken into account. Ultimately the definition should suit the use -- very helpful to be clear about both. Opportunities would include accounting for climate change adaptation &, generally, realism	5/29/2018 8:01 PM
41	Risk is that the species is like kudzu and thrives at the expense of everything "indigenous"; opportunity is enhanced biodiversity	5/29/2018 5:48 PM
42	Loss of focus of finite conservation resources	5/29/2018 3:06 PM
43	Benefit: Recognize cultivation knowledge and value of farmers; risk: losing momentum to also conserve native species at risk	5/29/2018 12:39 PM
44	risk is overlooking native species, while opportunity is to include something that may have characteristics valuable to local human populations	5/29/2018 12:22 PM
45	Risk: (further)promotion of non-native sp.; opportunity: increasing research efforts on impacts of non-native species on ecosystems	5/29/2018 9:49 AM
46	Non-nativ species will be seen as normal. This is not the case.	5/29/2018 8:49 AM
47	Risk: negative impacts on an ecosystem, e.g. biodiversity reduction and species extirpation. Opportunity: ecosystem benefits and increase in biodiversity.	5/28/2018 10:12 PM
48	Primary risk: the devaluation of native species and potential loss of native species if replaced by those that are considered most familiar and valuable to people.	5/28/2018 9:18 PM
49	Taking measurr	5/28/2018 10:27 AM
50	Their potential positive benefits.	5/28/2018 3:30 AM
51	It is a necessity: we must not overlook a risk/problem. But interpretation requires resolution: a higher BD index is not necessarily better if it includes aliens	5/28/2018 12:06 AM
52	Risk: erasing/flattening of important functional difference ("all species are the same"); opportunity: serious engagement with specificity of history and context and looking at ecology as socially and historically produced (complex relations between species regardless of origins)	5/27/2018 11:50 PM
53	Risk: Inflate species richness. Opportunity: Potentially provide food and 'habitat' to native fauna	5/27/2018 4:51 PM
54	PR: Eradication of some species. PO: The procreation of newer, perhaps more robust ecologies.	5/26/2018 11:39 PM
55	quantification alone can ignore ecosystem function and stability; better understanding of how ecosystems work when exposed to non-native species	5/26/2018 9:03 PM
56	Don't have a strong opinion. But if the impact of invasives on native species, of severe or negative, it would be a cause of concern	5/26/2018 6:19 PM
57	The risk is then valuing the progressive homogenization of biodiversity across the world.	5/26/2018 6:12 PM
58	Primary risk: loss of biodiversity. Primary benefit: increasing biodiversity and potentially improving ecosystem resilience with climate change (habitats moving out from under native species)	5/26/2018 6:11 PM
59	If there are significant effects of a history of coevolution on the community ecology of a place, then including non-native species in biodiversity carries the risk of not properly monitoring the functioning of a community. The primary opportunity to me is an acceptance of humans as a part of the ecosystem, and taking responsibility for histories of colonialism; global trade; labelling, devaluing and warring on 'others' in different ways.	5/26/2018 3:48 PM
60	Opportunity: reflects non-equilibrium ecology and the normative dimensions of baseline conditions. Minor risk: could create perverse incentives	5/26/2018 1:16 PM

61	risk- lose native species. opportunity - potentially more resilient to change, appreciate what is	5/26/2018 8:57 AM
62	The risk is not including them	5/26/2018 12:00 AM
63	It accounts for all species and so gives true idea of biodiversity, but it can also give false sense of true biodiversity	5/25/2018 9:16 PM
64	risk--they could be invasive or discourage native species. Opportunity--they can provide habitat	5/25/2018 8:04 PM
65	Primary risk is drastic impact on native species and ecosystems that lead to their destruction. Primary opportunity is in co-evolving to something that benefits both.	5/25/2018 7:52 PM
66	Primary risk might be that it obscures data regarding the health of native species+biodiversity, the human impact on those characteristics, and may also obscure the effects of invasive species on native species. The opportunity would be for a somewhat more holistic and realistic calculus of biodiversity in an area as it stands.	5/25/2018 7:46 PM
67	adaptation is the opportunity; monkeying too much with ecosystems the risk.	5/25/2018 7:37 PM
68	diverse agricultural crops as an opportunity (or are you only talking about biodiversity in "natural" environments?)	5/25/2018 7:37 PM
69	Risk: accepting - and therefore not mitigating/resisting - generalized spread of some species into all/nearly all ecosystems, therefore allowing for growing ecosystem homogeneity. Opportunity: to allow for and observe ecosystem dynamism (change)	5/25/2018 6:32 PM
70	You have to be very careful and evaluate the entire eco-social system to be able to evaluate these things. Some species will have negative environmental or social effects of introduced but some will likely have positive impacts. The key is to take a truly holistic and interdisciplinary approach to these issues and not knee-jerk approaches that include "received wisdom" type definitions of things like biodiversity and "invasive".	5/25/2018 6:32 PM
71	Relativism can be a slippery slope; historical conditions still seem relevant as a baseline goal	5/25/2018 6:28 PM
72	Primary risk = homogenization; primary opportunity = climate change-adapted species	5/25/2018 5:17 PM
73	There is no risk in including non-native species in biodiversity, especially if you use traditional measures of richness and evenness. It is the risk to biodiversity, itself, that should be the focus when discussing invasive species.	5/25/2018 4:05 PM
74	not an opportunity, simplify a reality: total count of species must include non-natives, esp. since we often don't know when or how many non-native species were introduced (e.g. bananas, coconuts, pigs...)	5/25/2018 3:50 PM
75	Opportunity: being able to trace how non-native species may interact positively or negatively with others. Risk: thinking that non-natives play the same ecosystem function as natives	5/25/2018 3:39 PM
76	Risk: sensitive landscapes with rare native species might be overlooked as conservation priorities because they are labeled as biodiverse and therefore robust; Opportunity: the productivity and resilience of an area/landscape may be more accurately reflected by the inclusion of non-native species	5/25/2018 3:13 PM
77	The primary risk is to think that alpha diversity increases when beta diversity decreases, meaning we are losing diversity at the global scale. The opportunity is to quantify beta diversity to better understand biotic homogenization.	5/25/2018 2:50 PM
78	Risk: Failure to consider effects over time (vs. an instant survey of species). Opportunity: A non-native species can become essential to a native species; e.g., an exotic plantago species is now the sole host for Taylor's checkerspot butterfly in the Willamette Valley (Oregon).	5/25/2018 2:49 PM
79	Not sure	5/25/2018 2:44 PM
80	Humans have been practicing enrichment of biodiversity for millennia (ex. Amazon). Humans as creators of Biodiversity as well as destroyers. Tinkering can work out or not, and therefore impacts biodiversity composition. It seems the only way to study Biodiversity is to include all species.	5/25/2018 1:59 PM
81	Risk: Creating uncertainty about desirability of biodiversity if it includes invasives, turning the public against the concept; opportunity: understanding actually existing species mixes in extant biodiversity	5/25/2018 1:12 PM
82	The primary risk of including non-native species as part of biodiversity is that the difficulty of tracking change over time. The opportunity is that as Earth system conditions change what counts as "native" is going to change in non-linear ways we should try to make sense of.	5/25/2018 12:45 PM

83	Risk: (complete or substantial) substitution of native species. Opportunity: potential positive ecosystem services depending on species and context	5/24/2018 9:45 AM
84	The risk is the community might relax and not relaise the problem i.e. it might reduce awareness among local community but not to expert..And the question of awareness might not be very important as its still very low among local community as of now. Opportunity; we have to accept invasive species/non native as a new environmental challenge/evolutionery force driving and shaping our communities and ecosytem.It does not make sense exclding it as biodiversity while its alreday there and whether you lkie or not it contribute to ecosytem function and process. Who knows there might be a point of saturation/balance between non native species and native species....the equilibrium state, it would look stupid if dont include it.	5/24/2018 8:12 AM
85	Risk: not understanding the scale or timeline of impact of non-invasives	5/23/2018 11:40 PM
86	Risk - some important endemic biodiversity will lose priority management. Opportunity: novel ecosystems to generate biodiversity and services to compensate and adapt to a changing environment	5/23/2018 11:01 PM
87	The primary risk would be the negative impact on native species (decreasing populations, taking over their habitat). Primary opportunity would be its usefulness as a food (especially if it is beneficial for health)	5/23/2018 4:16 PM
88	increased biodiversity is perceived as positive and the addition of a non-native species may not have a positive impact and therefore is misleading. That said, not all non-native species have a negative impact and are indeed a species that could add complexity and diversity to a system.	5/23/2018 3:39 PM
89	look at the definition of biodiversity! any new species increases it	5/23/2018 2:37 PM
90	Biodiversity means the variety of species. Non-native species are therefore part of biodiversity. So this question doesn't really make sense.	5/23/2018 2:33 PM
91	we shouldnt simply count species ... that is misleading in any context ... the risk is that we lack a proper understanding of all the issues ... we should include them but also take a more nuanced approach (see the good and bad and the potentials)	5/23/2018 2:03 PM
92	perte au niveau de nos espèces indigènes si les espèces non indigène se développent plus rapidement	5/23/2018 7:31 AM
93	I think they should be counted as part of the biodiversity, but should be categorized as non-native. Many non-native species are important established members of the community, so the opportunity is about cataloguing important species. Risk is that they could cause extinctions of native species.	5/22/2018 10:40 PM
94	primary risk : interspecific competition; opportunity : ecosystem services	5/22/2018 4:45 PM
95	risk: NNS may not have the same function in communities as natives, they may even threaten ecosystem functioning; opportunity: if they do have similar functions in ecosystems, they might be useful indicators of biodiversity	5/22/2018 4:18 PM
96	Primary risk: Potentially including species which are contributing towards native diversity decline. E.g., Herbivores on Islands. Primary oppurtunity: If the non native is not invasive and then it could have niche role that needs to be included as part of biodiversity.	5/22/2018 4:12 PM
97	Non-native spp can become invasive and displace native spp. Non-native spp can be useful for biocontrol buit require careful screening prior to introductionand then regular monitoring	5/22/2018 4:06 PM
98	risk: invasiveness; opportunity: food, fibre, fuel (i case of plants)	5/22/2018 3:57 PM
99	that approach may be closer to truth (primary both)	5/22/2018 3:44 PM
100	risk: masking extinctin of local species. Opportunity: accounting in a value-neutral way.	5/22/2018 3:36 PM
101	the risk is relate to the introduction of a new specie in an existing ecosystem, the opportunity is to increase the biodiversity of the ecosystem	5/22/2018 2:59 PM
102	Non-native species help ecosystems to adapt to climate change. They may in turn be endangered or become endangered in the course of climate change. Non-native populations may therefore be a valuable safeguard for the existence of the relavant species.	5/22/2018 1:12 PM
103	I am not too familiar with the biological consequences (risks).	5/22/2018 11:27 AM
104	NNS inclusion in biodiversity risks mis-interpretation by policy and decision makers as well as the general public. The opportunity is to know how many species in total there are, though given the large number of undescribed microbial etc. species, we can never know the real total.	5/22/2018 10:45 AM

105	Risk: weighing native vs non-native (should one be more important than the other when considering biodiversity?), opportunity: reflects the present situation best	5/22/2018 10:36 AM
106	The risk if of course to "banalize" them. The opportunity is to find out that in some cases, they may not be that bad.	5/22/2018 10:10 AM
107	The risk is, that n-n s are accepted by the general public as something that we can use for our purposes. This can lead to more "man-made" or -managed, artificial ecosystems (but this seems to be where we are going, anyway). On one hand this in turn means +/- uniform nature on the planet (which is sad) and less biodiversity overall. On the other it has the potential of catastrophic consequences when we make mistakes.	5/22/2018 9:51 AM
108	invasion and threaten to native species, no opportunity	5/22/2018 7:31 AM
109	Risk: less attention to invasives if they bump up biodiversity (generally a positive concept). Opportunity: A more holistic picture of ecosystem functions and relationship with human communities.	5/22/2018 3:25 AM
110	Risk - lack of action on loss of native species because of higher alpha diversity (but global homogenization). Opportunity - Improve ecosystem function if including non-natives with beneficial ecosystem impacts	5/22/2018 2:01 AM
111	poorly worded question	5/22/2018 12:27 AM
112	Increasing species diversity is an opportunity when a non-native species is involved in an ecosystem. In this case, the possibility of decline of native species is the primary risk.	5/21/2018 9:46 PM
113	Risk of becoming an invasive species. Opportunity to help in conservation of native species as well as provide high aesthetic values to society.	5/21/2018 9:11 PM
114	Risk: because of temporal and spacial scales examined, it is easy to overlook undesirable effects on marginalized/decreasing native species, and thus document the temporary increase in biodiversity that comes from adding species while missing the fact that important species are marginalized, extirpated on the small scale, or on the way to extirpation/extinction but not there yet - perhaps left in less desirable habitat where poor weather years will finally result in extirpation, for example. The primary opportunity is that we recognize the potential benefits/ecosystem services that non-native species may provide in both short and long term. Also, I want to mention the additional risk of globalization of flora and fauna - I LIKE to see different things when I go different places. Having the same thing in all places makes the world a less interesting place and potentially more susceptible to global "pandemics" that affect globally present species, whether they are beneficial or not.	5/21/2018 7:17 PM
115	no	5/21/2018 6:41 PM
116	Both depends on what type of species are non-native in a particular location	5/21/2018 5:00 PM
117	Risk of disturbance on ecosystem integrity in bio-geographically distinct areas	5/21/2018 3:48 PM
118	Primary risk - becoming invasive. Climate change scenarios don't allow us to trust that non-invasive character of some species will stay like that forever. Primary opportunity - don't foresee none	5/21/2018 3:44 PM
119	public perception as "any new plant is a good addition"	5/21/2018 3:24 PM
120	risk - mistake conservation targets; opportunity - evaluate the whole community	5/21/2018 3:08 PM
121	genetic erosion of native species, epidemy risk due to lack of natural resistance for pest/disease attack, loosing of local knowledge of management of native species due to excess of use of non-native species	5/21/2018 2:53 PM
122	Don't know	5/21/2018 2:52 PM
123	Not to fight them. Later, it will be too late.	5/21/2018 2:44 PM
124	Its important to favour native species in planting schemes, if non natives are included in that for their biodiversity value then this could impact the persistence of natives into the future	5/21/2018 11:38 AM
125	the invasive potential	5/21/2018 10:17 AM
126	They become protected while causing negative impacts in the ecosystem. However, new colonisers could also become targetted.	5/21/2018 9:50 AM
127	risk: threat to existng biodiversity; opportunity: enrichment in diversity	5/21/2018 9:13 AM

128	It is always important to have a proper inventory of all species, especially if tracking changes over time	5/21/2018 8:47 AM
129	Scale of species	5/21/2018 8:35 AM
130	Risk - missing the information on community structure relative to native community and hence impossibility of measuring the impacts of non-native species	5/21/2018 8:11 AM
131	Risk: We naively disregard their repeatedly shown impact on biodiversity and ecosystem function and stability. Opportunity: They are recognised as present in the landscape	5/21/2018 6:57 AM
132	Biodiversity is a global, not local, concept. Introduction of non-native species which cause loss or extinction of endemic species ALWAYS results in net biodiversity loss, by definition. The primary risk is therefore that native species may be allowed to become extinct without concern. The question as to what is the primary opportunity obtained by "including non-native species as part of biodiversity" is therefore meaningless, because they already are part of (global) biodiversity, in their native ranges. There is no compensatory advantage for regarding non-native species as part of "biodiversity" (meaning local) - there is only risk.	5/21/2018 6:45 AM
133	The primary risk is that invasive species are given equal weighting to native species. The opportunity is that it might open up more pragmatic questions about how we realistically manage and fund invasive species management programs.	5/21/2018 4:19 AM
134	Primary risk- negative impacts are well documented , primary opportunity - human well-being is underdocumented	5/21/2018 3:02 AM
135	Species release effects due to non-action approaches	5/21/2018 2:33 AM
136	Impacts on native spp (possibly not recognized at present). No primary opportunity.	5/21/2018 1:30 AM
137	Mis-identification of species that are very invasive, causing irreversible declines in biodiversity.	5/21/2018 1:09 AM
138	It encourages people to think that introduced species are OK. If a species has been present for a long period of time, it needs to be included in biodiversity assessments as it has become part of the local ecology.	5/21/2018 12:25 AM
139	Biodiversity includes both	5/21/2018 12:06 AM
140	either way it's matter of objectivity, but timeframe of assessment is crucial here	5/20/2018 10:40 PM
141	the risk is influencing the natural ecosystem through introduced species. there is no opportunity to include non-native species in biodiversity as this not the natural state. just like we don't include pollutants of air or water in the natural levels for healthy water or air. invasive species and non-native species are pollutants- some worse than others	5/20/2018 8:13 PM
142	risk: false interpretations of role of biodiversity; opportunity: they are there and often integrated in the local webs of life	5/20/2018 5:57 PM
143	Their utility	5/20/2018 5:21 PM
144	Opportunity: non-native tree species provide a much broader spectrum of forest plantation species	5/20/2018 4:43 PM
145	Risk of falsely assuming higher biodiversity is better. Identify the contributors to this higher biodiversity	5/20/2018 3:52 PM
146	replacing them	5/20/2018 3:50 PM
147	risk to global biodiversity maintenance / ponderate their value for ecosystem functions	5/20/2018 7:18 AM
148	It is an inventory list so should be completely inclusive.	5/20/2018 4:20 AM
149	Risk: incomplete understanding of the beneficial and harmful impacts of non native species; Opportunity: potential benefits of non native species and a respect for the inevitable transition and evolution of ecological communities	5/20/2018 4:18 AM
150	pro: simple definition because it is inclusive. con: may undermine threat of invasive species	5/20/2018 1:53 AM
151	I think this is a pointless discussion. Biodiversity is simply a count of organisms so by definition should include non-native species. Biodiversity total will change as species become naturally extinct or are eradicated or new ones arrive	5/20/2018 12:38 AM
152	Risk is that it will de-value native species or mask declines in native species because biodiversity numbers will be higher due to inclusion of widespread non-native species. Opportunity is for scientists to better understand total # of species in a given area.	5/19/2018 10:50 PM

153	I can't answer in terms of risks and opportunities, but if a non-native species has been able to establish itself within a native community, then it is part of that community, influencing and being influenced by any (a)biotic dynamics so excluding it would create an artificial, or at least fragmentary picture of biodiversity dynamics	5/19/2018 10:29 PM
154	The risk is that it establishes an equivalence that has not (in most cases) been established. I see no primary (nor secondary) opportunity whatsoever.	5/19/2018 9:33 PM
155	Risk = creating a bias and providing arguments to the introduction of non native species	5/19/2018 4:08 PM
156	Risk is eradication of native biodiversity and potential opportunity is the economic benefits derived from the harvesting of non- native species	5/19/2018 3:41 PM
157	Primary risk: impossibility for decision makers to protect ecosystems and livelihoods. Primary opportunity: harmonization of invasion ecology and politically correctness, i.e. preferring moral sensitivity over facts	5/19/2018 3:24 PM
158	All species are equal- Man's category of "introduced" is muddled and wrong	5/19/2018 3:18 PM
159	unpredicted (unpredictable!) impact	5/19/2018 3:15 PM
160	People would think that it is easy to increase (reverse the loss) biodiversity: just add more species into an area	5/19/2018 2:23 PM
161	High competition	5/19/2018 12:34 PM
162	Risk that decline in one is masked by rise in another when using in an aggregate indicator. Opportunity could be around more open responses to experimental rewilding and to species adjusting to climate changes	5/19/2018 11:23 AM
163	Extinction indogeneous species	5/19/2018 11:03 AM
164	Risk: without any other thing changing to better, biodiversity would increase adding these species. Relationships between good ecological status and biodiversity would be confounded. A good example is the release of multiple non-native species of fish into reservoirs (a degraded environment in which fish fauna "richness" increases artificially, nothing else changing to better). I cannot see opportunities	5/19/2018 10:24 AM
165	Eventual replacement of native species through lack of predators controlling invasive species. Non native species should only be incorporated under strict control	5/19/2018 9:57 AM
166	Loss of native Biodiversity values that cannot be replaced	5/19/2018 9:40 AM
167	No risk at all if the numbers are counted and kept separately	5/19/2018 9:23 AM
168	Risk: heavily invaded ecosystems may appear species diverse but be ecologically unstable. Opportunity; many/most non-native species are not invasive so don't destabilise ecosystems	5/19/2018 8:06 AM
169	risk - may get policy approval and schedule categories before we understand their threat	5/19/2018 7:49 AM
170	Risk : They will be treated as a given,and hence no remedy will be chosen for their control. Opportunity : They may have answers to other problems arising out of loss/eradication of sympatric native species	5/19/2018 7:28 AM
171	Risk : Hush up natives ones. Opportunity : Enhance biodiversity	5/19/2018 7:04 AM
172	they can be documented in the area....showing their extent and population structure	5/19/2018 6:46 AM
173	Risk: devaluing rarer native species. Opportunity: more realistic picture of true biodiversity.	5/19/2018 4:58 AM
174	Assuming that non-native species will and can provide the same benefits as native species and assuming that these non-native species will interact positively (or at least in a beneficial manner) with other species that have co-evolved with said native species.	5/19/2018 4:31 AM
175	Primary risk is that you count a species that could have adverse impacts on several other species. This seems non-sensical from a conservation perspective. If you do not count them however, we are doing a very subjective count.	5/19/2018 3:24 AM
176	A false perception of ecosystem health	5/19/2018 2:18 AM

177	Inadequate screening to fully understand their ecological role in the naturalised environment and their potential to change 'invasiveness status'. Some habitats are so degraded ecologically that they will never be restored only with native species. The role of non-native species in site restoration should not be underestimated or discounted. It may require a much lengthier rehabilitation period than is wished for and may never result in the complete removal of all non-native species. So be it.	5/19/2018 2:16 AM
178	homogenization and social values	5/19/2018 2:05 AM
179	risk = unintentional implication that bringing more species to a jurisdiction (ie increasing species diversity) is a biodiversity improvement. Opportunity = quantification of the real world, biosecurity and species movement patterns, knowledge of what is out there	5/19/2018 1:27 AM
180	nothing is more permanent than change; to accept evolving ecologies is to be adaptable and resilient as a society	5/19/2018 12:52 AM
181	risk, you don't really can distinguish long-term non-native and invasive, hence your results might not reflect the reality. But, on the other hand, including nn-species as part of bd would increase your significance on the environment you want to describe.	5/19/2018 12:04 AM
182	This is a nonsensical question. All species are part of biodiversity. Many non-native species are very destructive to biodiversity, but they are still part of the species count.	5/19/2018 12:01 AM
183	As explained above - non native species are likely to increase with changing climate conditions - the primary risk may be the risk of such species completely dominating an ecosystem - and in the process decreasing naturally occurring resilience and biodiversity levels etc. in my view, this trend of increasing non-native species provides us with an opportunity to re-think some basic conservation dogma - maybe instead of trying to desperately keep ecosystems the way they are - we should instead accept that community compositions will eventually change and use this opportunity to assess how best to move forward with ecosystem management not based trying to preserve what was - but adapting to what will be...	5/18/2018 10:22 PM
184	primary risk is that we loose "typical" biodiversity, and opportunity is that we consider their role in ecosystem functioning	5/18/2018 9:59 PM
185	Fuzzy governance (risk)--Getting out of protected areas and connecting with domains like urban, agricultural, and marine environments (opportunity)	5/18/2018 9:31 PM
186	Risk: shadowing threats for biodiversity	5/18/2018 9:28 PM
187	Whether we like it or not non native and native species are part of our biome and thus biodiversity. We would starve without non native species. Native species can also be invasive under certain conditions.	5/18/2018 9:20 PM
188	Risk: noise in data opportunity: allocation of funding for conservation that consider ecosystem services better	5/18/2018 8:11 PM
189	If not differentiated as such, counting non-native species together with native will mask trends in diversity of native species.	5/18/2018 7:29 PM
190	Risk: Including non-natives will artificially inflate the species totals and will obscure the loss of native species. Opportunity: By tracking non-native species, you are aware of how many there are and other relevant details.	5/18/2018 6:47 PM
191	By including them without calling them out, you imply that the community is improved with the presence of non-native species. This may not be the case. (Excluded are all the food resources that are non-native).	5/18/2018 6:46 PM
192	it's a question of at what temporal scale we are interested in constraining our biodiversity analysis to. Of course in the present moment (early in an invasive species' invasion process) local 'native' biodiversity will be negatively impacted, but over time as the invasive species adapts and diversifies, I believe overall biodiversity is likely to be regained. Look at the genetic diversity of Taraxacum officinale populations...	5/18/2018 9:46 AM
193	Loss of biodiversity to invasive species is a risk; enhancement of social, medicinal, soil replenishing and other values are opportunities	5/17/2018 9:20 PM
194	the risks and opportunities ar emostly normative I think, associated with our belief that non-native spp are generally bad and biodiversity is good. by adding non-natives to the accounting it muddies the normative waters.	5/17/2018 6:06 PM
195	It more accurately reflects reality based on the definition of diversity	5/17/2018 1:42 PM

196	Risk: reducing biodiversity to a numbers game (more=better etc.). Opportunity: contribute towards de-vilifying non-natives	5/17/2018 6:19 AM
197	The opportunity is that we can document the full range of species that exist in a given place.	5/17/2018 4:35 AM
198	This question doesn't really make sense to me; of course these species are part of calculations of species presence and abundance that are used to determine biodiversity. The problem is that certain invasive species reduce overall biodiversity because they are present in such large numbers that they exclude other species. They are clearly part of ecosystems, but they also impact ecosystems.	5/17/2018 3:32 AM
199	Risk: Normalizing the presence of ecological "bullies"; Opportunity: Recognizing the presence of all species in a location, including those that stabilize recently disturbed areas; genetic material for novel ecological structures and processes under climate change	5/17/2018 2:26 AM
200	A more comprehensive understanding of ecology - e.g. how native and non-native species collectively produce an environment that supports some species and jeopardises others. However, it would be useful to have a working definition of biodiversity here.	5/17/2018 1:23 AM
201	Benefit=better understanding of how nature works (with us as mediators). Risk=that we won't prioritize ecosystem health if we don't consider species origins and interactions	5/17/2018 12:53 AM
202	Biodiversity is a term referring to the biological diversity of a given area. I don't think that definition is flexible. If we want to discuss native biodiversity we should say "native biodiversity" or have some other term, not try to redefine a term that has a clear meaning based upon its root words.	5/17/2018 12:33 AM
203	Ecosystem interactions, feedback loops, hysteresis	5/16/2018 11:21 PM
204	Risks include undervaluing native species. Opportunities include thinking critically about what types of species have value in ecosystems and how we might better understand all different kinds of values associated with different species.	5/16/2018 9:35 PM
205	The primary risk is that non-native species would inflate biodiversity estimates and might lull people into a false sense of security that that particular habitat is thriving. The primary opportunity is accurately recording the number of species present in a habitat or area.	5/16/2018 8:54 PM
206	The primary opportunity is that introduced species can be important to local livelihoods and biodiversity (e.g. shade coffee in the neotropical Americas). The primary risk is in oversimplification and potentially forgetting the nuanced histories of which species are non-native.	5/16/2018 8:54 PM
207	negative attributes while simultaneously outcompeting native species	5/16/2018 8:21 PM
208	risk of complacency, opportunity for understanding ecosystemic process	5/16/2018 8:15 PM
209	Risk: overestimation of biodiversity, opportunity: habitat conservation > species level discussion	5/16/2018 8:05 PM
210	Opportunity+ include spp that are culturally important and fulfil ecosystem services	5/16/2018 7:50 PM
211	risk involves normalizing non-native plants, but the opportunity involves having a real count of what is actually there in terms of biodiversity	5/16/2018 7:33 PM
212	medicinal plants and food sources	5/16/2018 7:20 PM
213	Risk: Sends the message that all included non-native species are desirable and that not managing them is okay, even to the detriment of native species. Opportunity: Ecosystems change, and including non-native species as a part of biodiversity encompasses this aspect of ecology.	5/16/2018 6:42 PM
214	I view biodiversity as a descriptive category -- not a prescriptive category -- so inclusion of all present species would be necessary to include in any description of biodiversity.	5/16/2018 6:28 PM
215	i dont necessarily see a risk with including non-native species as part of biodiversity, but see it as an opportunity to better understand the relationships between non-native, native and domesticated species. There may be significant correlations in lifespan, economic impacts, and eventually social implications.	5/16/2018 6:16 PM
216	The primary risk is loss of native flora and fauna, whether that is considered biodiverse or not. Many native species have social and cultural significance, or have other intrinsic value that is worth protecting. However, non-native species also have the potential to contribute to biodiversity and to provide an ecosystem that benefits other flora and fauna, and may provide other socially desirable qualities. My main concern in valuing non-native species is the potential loss of "valuable" (monetarily or morally) native species as a result of competition (whether this qualifies as invasive or not).	5/16/2018 6:13 PM

217	too complex a question for a short answer. biodiversity is a problematic notion for lots of reasons	5/16/2018 6:04 PM
218	risk = invasion opportunity = new potential food sources	5/16/2018 5:59 PM
219	Risk - Reifies categories of native/non-native. What is considered to be a 'natural' or baseline ecosystem; Opportunity - More dynamic and evolving understanding of biodiversity over time and space	5/16/2018 5:02 PM
220	The opportunity involves observing change in local biodiversity over time in response to a number of factors, including climate change and urban development, and could remake the way we view the concept of "resilience." Perhaps non-native species help counterbalance negative human impacts on local biodiversity but our focus on native vs. non prevents us from seeing it? On the other hand, the risk is that proponents of expanding development/agriculture or climate change deniers will take a "bottom line" approach (i.e. "total biodiversity" in a given area) and use it to argue that impacts of development, oil drilling, pollution, etc. etc. are not as negative as portrayed by scientists/the media.	5/16/2018 4:40 PM
221	risk: développement incontrôlé des espèces exotiques; opportunité: augmentation de la biodiversité du milieu d'accueil	5/16/2018 4:32 PM
222	Risk is that we manage for species which are undesirable or cause undesirable outcomes; the opportunity is that we remove normative evaluations from the biological science side of the equation	5/16/2018 4:26 PM
223	The definition of invasive remains too subjective. As systems change at an increasingly rapid pace, non-native species will become more common. They must be included in biodiversity assessments because that will be the accurate current assessment of that ecosystem	5/16/2018 4:11 PM
224	I can see no risk, the primary opportunity is to focus on what is in a place, rather than what (some) humans want there	5/16/2018 4:08 PM
225	The primary risk is that we fail to distinguish between non-native species that do not have negative impacts and non-native species that are harmful. That's the benefit of using the term invasive (if based on evidence of harmful effects). Invasive helps us differentiate between non-native as a broad category and specific non-native species that are harmful. But this question will become even more important as climate changes and we see range shifts and species that are native at a regional or continental scale showing up in locations where they haven't existed in recent history. This will challenge our notions of native and non-native, and biodiversity and require us to be even more thoughtful regarding what is considered problematic.	5/16/2018 4:04 PM
226	Primary risk-out-competing native species, primary opportunity—allows humans to alter environment	5/16/2018 3:58 PM
227	risk: it neglects the change in biodiversity that a non-native species potentially accounts for and opportunity: accepts that non-natives could at the same time enhance biodiversity plus climate change is impacting all ecosystems and there comes a point when we might have to ask what actually is native anymore	5/16/2018 3:56 PM
228	Risk: favouring species from an anthropocentric perspective (e.g. "easy" to manage, establish, restore) as opposed to an ecosystem approach. Opportunity: some non-native species add value and could/should be approached as such.	5/16/2018 3:43 PM
229	Risk: economic criteria downsizing ecological viability. Opportunity: Cultural diffusion.	5/16/2018 3:35 PM
230	don't see risks if it is done correctly	5/16/2018 3:34 PM
231	I gave this answer because I believed it to refer to biodiversity assessment in a descriptive (neutral) way, which means that ALL species present should be listed. However, when (normatively) evaluating the state of biodiversity or setting targets for future biodiversity I believe that the invasive non-native species should be got rid of. For example, a rich biodiversity should not include non-native invasive species. There is a risk that those against nature conservation (in a particular place) will use such species to boost their arguments for messing up the place.	5/16/2018 3:30 PM
232	Dangers in creating a perception of increased species diversity in a bubble likely to pop at some point, whereas the benefits are that such a definition more adequately represents the range of living organisms in a particular location.	5/16/2018 3:30 PM
233	Risk: supplanting native biodiversity with non-native biodiversity. Opportunity: like it or not, non-native species become part of an ecosystem	5/16/2018 3:29 PM

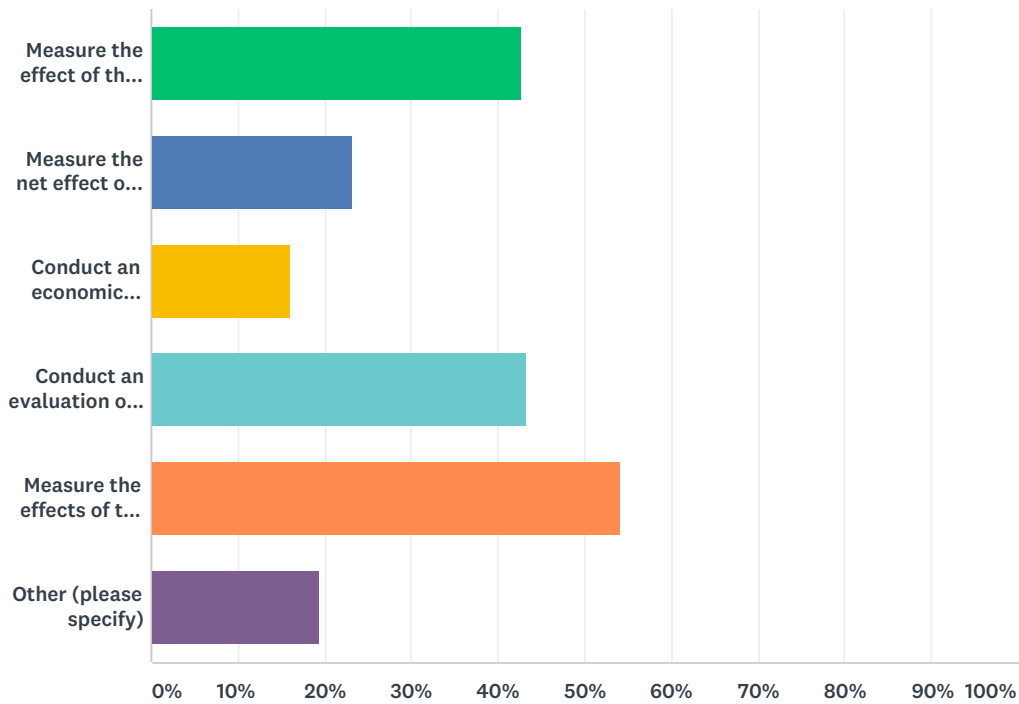
234	The primary risk is that the movement of species will become normalized and the perceived risk will diminish in people's minds. The primary opportunity is that it provides a more realistic conception of biodiversity.	5/16/2018 3:28 PM
235	I suppose distinguishing native and non-native will be difficult in practice - how far back in history do you need to go to distinguish native/non-native?	5/16/2018 3:27 PM
236	Not sure if "risk" is the right characterization. If the measurement of biodiversity means species richness, then it must include all species in a given sample, or so it would seem. I don't see the quantification of biodiversity as posing any particular risk.	5/16/2018 3:22 PM
237	Non native species are part of the biodiversity. It's a matter of definition, not a matter of whether there is a risk so I don't understand the sense of the question.	5/16/2018 3:19 PM
238	It depends on the question you're asking, including them could show high or low biodiversity depending on the level of invasion this is entirely context dependent.	5/16/2018 3:18 PM
239	Not knowing the long term effects. Depends from where come the non-native species.	5/13/2018 5:33 AM
240	_ overestimation as local equilibrium break down with lost of many	5/12/2018 11:42 AM
241	The primary risk is that non-native species may "overestimate" the actual biodiversity. One should clearly distinguish both in reporting biodiversity. On the other hand, the primary opportunity is linked to that is gives a picture of the "gross" biodiversity and the non-native species may provide ecosystem services not filled or insufficiently filled by native species.	5/11/2018 10:22 AM
242	Primary risk: ecosystem shifts that occur due to non-native species may make it difficult to study evolutionary ecology/co-evolution in certain regions, Primary opportunity: more-resolved understanding of actual ecosystem functioning in places where high number of non-native species are present	5/11/2018 10:08 AM
243	Including those species as part of biodiversity is a risk as they can become invasive. However many non-native species are used for food, medicine and may be of major important for local people	5/11/2018 12:28 AM
244	This is a hard question. A risk is that they become more socially acceptable which would possibly limit their governance in the future. One opportunity is some beneficial IAS could be recognised as important in some contexts	5/10/2018 3:18 PM
245	Risk: closing our eyes to fluidity and change in nature. Opportunity: openness to adaptation	5/10/2018 3:02 PM
246	The primary risk could be the invasion but could help support biodiversity with their potential with their potential of rapid growth.	5/10/2018 12:32 PM
247	The primary risk is the invasion risk and the primary opportunity is the contribution of this species in the fight against food insecurity and climate change negative impacts	5/10/2018 11:10 AM
248	The primary risk could be a bias in estimating the accurate species richness of a given ecosystem. The primary opportunity could be to have a great knowledge on suitable habitat for species other than native one	5/10/2018 9:15 AM
249	no risk. they are also species.	5/9/2018 11:45 PM
250	Risk ok native species extension and opportunity to keep a large biodiversity everywhere	5/9/2018 10:32 PM
251	There is a risk of not taking account of how dynamic ecosystems can be in the face of global climate change	5/9/2018 6:30 PM
252	Primary risk: Commodification of nature. Opportunity: To better understand their influence on biodiversity and the factors modulating their persistence	5/9/2018 1:51 PM
253	Un envahissement trop conséquent et la survie d'espèce native	5/9/2018 12:12 PM
254	We lose the unique species for which there is a national responsibility. And there will be homogenization of Flora and fauna. Opp: as long as they are non invasive they increased diversity.	5/5/2018 1:48 AM
255	The primary opportunity is that it gives a more complete view of the situation, the primary risk is that depending on how the people interpret this, it could lower standards.	5/4/2018 3:31 PM
256	risk: ignore the sociocultural benefit of native species. opportunity: it can increase the number of species richness	5/4/2018 12:49 PM

257	Primary risk: to neglect the impact of some NNS on endemic or rare species or on fragile ecosystems. Opportunity: avoid bias that "foreign" is necessarily bad	5/4/2018 12:46 PM
258	Not including non-native species as a part of biodiversity is a repudiation of reality. Put another way it is ideology over ecology.	5/4/2018 6:57 AM
259	The primary risk is related to invasive species which can threaten the native species; The primary opportunity is the possibility for additional use values for people	5/3/2018 10:01 PM
260	Risque: "surestimation" de la biodiversité et minimisation des menaces pesant sur elle. Opportunité: Evaluation et vision plus globale et objective	5/2/2018 3:30 PM
261	Risk is that we will simply have to introduce a few non-native species to enhance biodiversity of a given region/place. Opportunity is similar as the aforementioned risk...	5/2/2018 2:04 PM
262	Pression sur les espèce indigène	5/2/2018 1:02 PM
263	I don't see much of a downside. Only a more accurate description of community structure.	5/2/2018 8:04 AM
264	includes invavise species, which are one of the major threats do biodiversity	4/30/2018 6:46 PM
265	It is a matter of time. How long until a non native species can be considered as native (or adapted)? The introduction of a new species can disturb biodiversity of one place, however it can also lead to better health of the biodiversity through its modification and new relations. I don't think biodiversity should be seen as fixed (and treated as such, like in a museum), but rather as evolving.	4/30/2018 11:13 AM
266	Risk: attributing importance to specie-rich areas that host non-native species that are potentially harmful to native species. Opportunity: portray a more realistic state of biodiversity and enable to think how species composition dynamics could evolve.	4/30/2018 10:39 AM
267	the uncertainty of harm or benefit	4/29/2018 8:40 PM
268	None	4/29/2018 3:00 PM
269	Including invasive species	4/28/2018 6:40 AM
270	Support for other biodiversity components	4/27/2018 8:51 AM
271	I think before one can consider whether there are risks or benefits of non-native species one will have to take consider the type of habitat/ ecosystem. Maybe there are benefits in urban areas but there maybe many risks in a pristine rainforest.	4/27/2018 3:40 AM
272	Primary risk is the drastic loss of native species however not possible so long as it's controlled. Primary opportunity is they may boost ecosystems, attract Bees. Enrich soil	4/27/2018 1:52 AM
273	Primary risk: The non-native species might be potentially damaging to the ecosystem and biodiversity. Affects could be through competition, predation, genetic disease, and habitat alteration. Primary opportunity: Not all the non-native species in all geographical location have negative impact on the local biodiversity. Thomas and Palmer (2015) studied the impact of non-native species on British flora. The study found out that the non-native and native species lived happily together for years. Chew and Hamilton (2011) argued on the definition of non-native species.	4/26/2018 9:04 PM
274	Bring unbalance to native biodiversity	4/26/2018 8:44 PM
275	Integrating them in monitoring or other studies is a risk of trivialisation of these species and afterwards of acceptance of their presence in ecosystems	4/26/2018 3:04 PM
276	Primary risk: loosing support of other biologists. Primary opportunity: gaining support of public.	4/26/2018 3:03 PM
277	Depends on the species	4/26/2018 3:00 PM
278	The primary risk seems to be cheating biodiversity and stable ecosystem goals on paper by pretending the invasive problem species decimating the current system are actually a part of it. I think conservation would be more complicated then. The main advantage would be a clarity of definitions for further research, all animals is a far more objectively measurable thing for studies than all animals except the ones which are invasive and causing immense harm. Furthermore, species migrate by themselves as well, so it is difficult to count those properly while excluding such that humans moves across the planet.	4/26/2018 12:25 PM

279	RISK: Suddenly the 'biodiversity crisis' is no crisis anymore, and conservation action of native species is at risk. OPPORTUNITY: Integrating non-native & invasive species in assessments would show how much pressure by non-native species is put on local biodiversity. I.e., better information of conservation needs.	4/26/2018 11:31 AM
280	primary risk may be that by considering non-native as part, the loss of biodiversity could be masked. The primary opportunity is that these species give also benefits to human well being	4/26/2018 10:52 AM

Q7 What methodological approach is most appropriate for measuring whether a given non-native species is desirable or not?

Answered: 310 Skipped: 4



ANSWER CHOICES	RESPONSES
Measure the effect of the non-native species on native species richness	42.58% 132
Measure the net effect of the non-native species on total species richness	23.23% 72
Conduct an economic cost-benefit analysis of the addition of the non-native species	16.13% 50
Conduct an evaluation of ecosystem services gained and lost through the addition of the non-native species	43.23% 134
Measure the effects of the non-native species on ecological functions	54.19% 168
Other (please specify)	19.35% 60
Total Respondents: 310	

#	OTHER (PLEASE SPECIFY)	DATE
1	The risk of ecological and therefore also economical damage through potential sideeffects might be to high to take the risk for introducing these species. What would be the gain? Couldn't this be reached by improving the conditions for native species?	6/27/2018 5:18 PM
2	a combination of these	6/25/2018 10:39 AM
3	Not only alfa diversity but also beta should be considered in order to assess contribution of ias to biotic homogenisatiin	6/11/2018 6:38 PM
4	A broad scientific study including a large number of experts and field are required. It can not be determined with a questionnaire.	5/31/2018 8:44 AM
5	Conduct an assessment of positive and negative impacts on all sectors (economic, environmental and social)	5/28/2018 3:30 AM

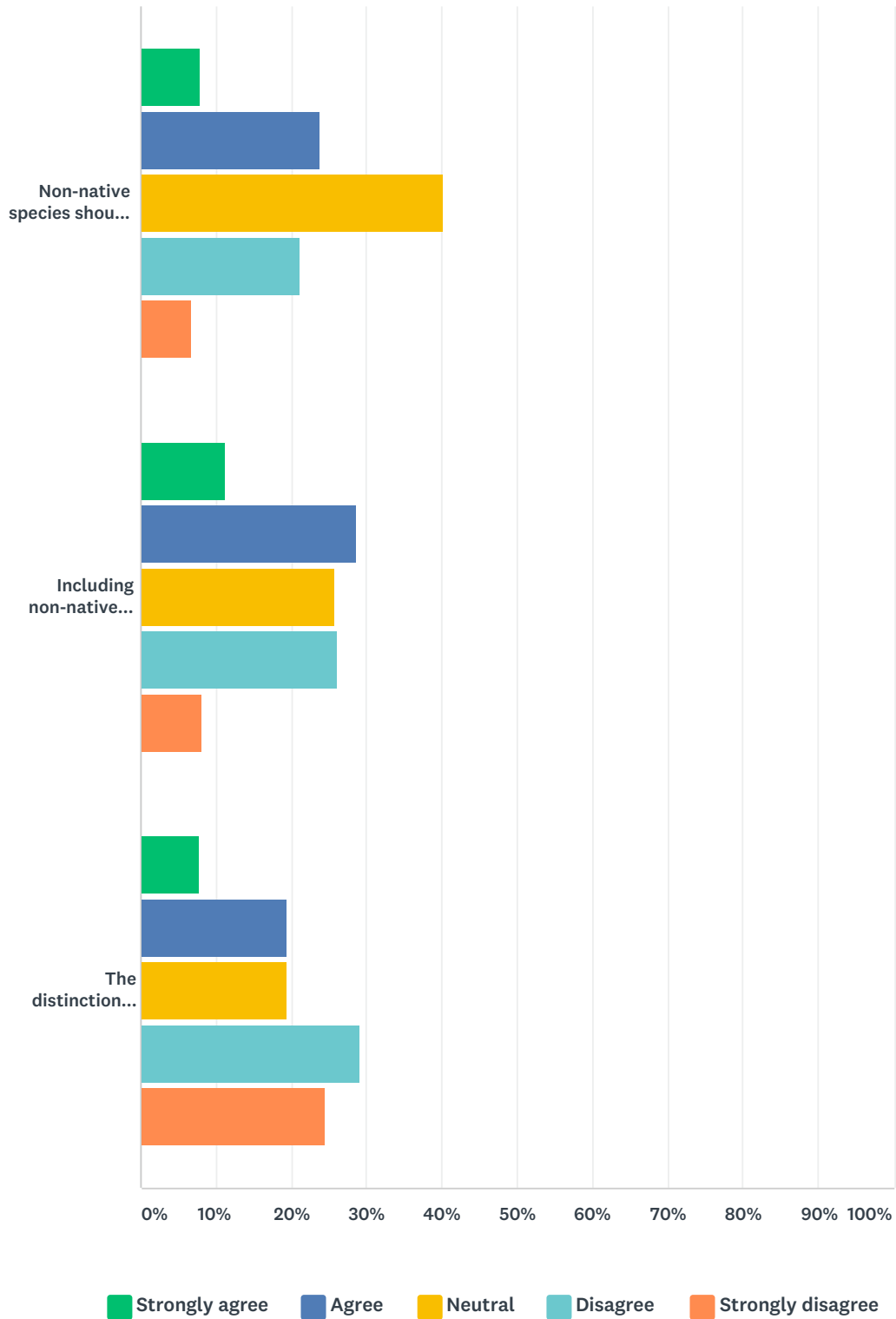
6	Look for documented effects elsewhere. In the absence of such info, the precautionary principle applies	5/28/2018 12:06 AM
7	Long term analysis of local, regional, and global interactions of various species. Scale is crucial for understanding species and their ecological interactions.	5/26/2018 11:39 PM
8	depends on the ecosystems being studied, e.g. measuring desirability of non-native species in New Zealand or Hawaii may differ from measuring desirability of non-native species in thoroughly humanized habitats with well-established "invasive" populations.	5/26/2018 9:03 PM
9	Multiple methods that capture both ecological and social values	5/26/2018 1:16 PM
10	All of these things are warranted. I would suggest that studying the trophic effects that such species may have on the food chain is also very important, as some species may disrupt ecological balance, sometimes chemistry, and propagation or predation patterns in unforeseen ways.	5/25/2018 7:46 PM
11	multi methods, from both quantitative and qualitative methods toolkit. Triangulate all of these methods for the least reductionist study.	5/25/2018 7:37 PM
12	It is much more complicated than this - please see my response to #6 above.	5/25/2018 6:32 PM
13	Evaluate how important the non-natives have become culturally	5/25/2018 6:28 PM
14	Evaluating non-natives as disease vectors, predators, or competitors	5/25/2018 3:39 PM
15	It seems a combination or an ecological component (above) plus discussions with people would be needed	5/25/2018 1:59 PM
16	Consideration of life-traits considered to be indicators of possible invasiveness character of the species. Bearing in mind lag-phase for invasion.	5/24/2018 9:45 AM
17	NONE OF THESE ALONE. It depends on context ... species richness is seldom the issue. often, in a conservation context we need to know the long term viability of the species of conservation concern and general value and how these are impacted, and the impacts for people and the values they derive from the environment ...	5/23/2018 2:03 PM
18	Desirable to whom? As it is not just one but a combination of approaches that would lead to a more transparent answer.	5/22/2018 4:12 PM
19	combination of effect on native spp richness and ecological functions	5/22/2018 4:06 PM
20	All of the above, i.e. a multi-discipline approach.	5/22/2018 10:45 AM
21	A non-native species is not "desirable"! It may be a least harmful solution to an ecological problem, but that's all.	5/22/2018 9:51 AM
22	Measure the risk of establishment and classify the potentially high impact alien species to prioritize prevention, which results in the most cost effective approach against invasive alien species	5/21/2018 3:48 PM
23	Measure the effects of the non-native species on community structure	5/21/2018 3:08 PM
24	measure the effect of non native species on the species assemblage and trophic networks	5/21/2018 9:22 AM
25	A complex measure including the effect of non-native species on species community composition and on ecosystem functioning	5/21/2018 8:11 AM
26	The economic CBA and the ecosystem services/functions evaluation must include the (global) biodiversity loss costs in order to be comprehensive and meaningful.	5/21/2018 6:45 AM
27	Desirability is a culturally specific and value laden term. We cannot measure desirability or reduce it to a specific measure without knowing who is doing the measuring and for what purpose.	5/21/2018 4:19 AM
28	Systems thinking needed	5/21/2018 12:06 AM
29	Combination of above mentioned approaches (e.g. effect on: natives; net effect; ecosystem services;...)	5/20/2018 10:40 PM
30	All of the above	5/20/2018 4:18 AM
31	I think as many metrics as possible should be evaluated. It is likely that a non-native species will be good for some things, bad for others and we need to acknowledge both.	5/20/2018 1:53 AM
32	The approach needs to consider the environmental and ecological, social and cultural and financial costs and benefits	5/20/2018 12:38 AM

33	I don't think it can be any single one of these, but must be a multi-faceted approach. Some non-natives have strong immediate effects on native species richness, others cause declines in abundance of native species which may lead to loss of native species later; some have big effects on the economy (positive or negative); some have effects on ecological functions or services. There is no single measure that is adequate for all scenarios.	5/19/2018 10:50 PM
34	Impacts on livelihoods (e.g. cultivated lands, range lands in Africa)	5/19/2018 3:24 PM
35	Combination - review of the various costs and benefits, in terms of economics, ecosystem services, biodiversity etc.	5/19/2018 8:06 AM
36	Combination of the choices above.	5/19/2018 4:58 AM
37	a combination of approaches to assess benefits and risks. The ecosystem approach would be the most holistic one. It is also important to consider the scale on which this is done.	5/19/2018 3:24 AM
38	For me it is all. The complication is that an exotic grass is highly desirable on grazing land, and can be highly destructive in conservation areas. So the answer depends upon the context and can be both useful and damaging. All of the options above are useful measures.	5/19/2018 1:27 AM
39	Non-native species are generally not desirable. The degree to which they are undesirable should be measured in terms of the reduction in native biodiversity caused by them and any loss of ecosystem function associated with the loss of biodiversity they cause.	5/19/2018 12:01 AM
40	conduct a cost benefit analysis which considers all factors including economic and biological	5/18/2018 9:20 PM
41	Consideration of multiple factors is always better than a singular approach.	5/18/2018 8:11 PM
42	All would be appropriate to answer the question of desirability.	5/18/2018 7:29 PM
43	All of these have relevance, although species richness may be increased with non-natives, but hide their dominance and impacts. We usually lack quantitative measurements to address economics, ecosystem services, and ecological functions.	5/18/2018 6:46 PM
44	i think a combo of these would be most useful. Why limit yourself when we have multiple ways of examining social-ecological systems	5/17/2018 6:06 PM
45	measure local people's attitudes about it	5/17/2018 1:42 PM
46	Including provisioning and cultural ecosystem services	5/17/2018 2:26 AM
47	Meaningful consultation with local / indigenous groups whose histories, worldviews and livelihoods may have native non-human species at their centre.	5/17/2018 1:23 AM
48	The complexities of interaction, in my opinion, make all of these methods fall short and somewhat impossible to truly quantify in a meaningful way. I think the best method is going to be more qualitative, and dependent on local user groups, and preferably indigenous user groups who have long interacted with the landscape and biota.	5/17/2018 12:33 AM
49	It depends what the purpose of the study is - whether the measurement is on non-native species' economic impacts on local livelihoods, on biodiversity of native species, etc. but all of the above are potentially viable depending on the study purpose.	5/16/2018 8:54 PM
50	I'm not entirely sure, but all of the options listed seem likely to answer the question in some way.	5/16/2018 6:42 PM
51	Conduct an evaluation of local valuations of native and non-native species (NOT through the ecosystem services lens)	5/16/2018 6:13 PM
52	No one method is appropriate; a combination of multiple frameworks for analysis and evaluation including local perspectives is key	5/16/2018 5:59 PM
53	I'm not sure--"desirable" seems to be cast primarily in human terms, even when talking about things like species richness. what if an area was species deficient but a bunch non-native species changed all that (example, drought resistant plants invading a desert area)? Is that still desirable? Not for me. I think biologists should take less of a one-size-fits-all approach.	5/16/2018 4:40 PM
54	Normative decisions should be made by the stakeholders affected directly or indirectly. This is broad, but unique to any specific context.	5/16/2018 4:26 PM
55	Define desirability from multiple angles and include all measures - including social/cultural valuations	5/16/2018 4:08 PM

56	These methods are too mechanistic. Desirability is a social concept and thus there will be disagreement about which non-native species are desirable. Thus, a more deliberative process that takes into account different values is essential. I'd recommend a science-stakeholder committee comprised of scientists, land managers, land owners, state agencies, etc. They can review all available evidence (which in many cases will be quite limited) and make decisions about desirability (which in many states means list on the noxious weed list).	5/16/2018 4:04 PM
57	talk to people in the area	5/16/2018 3:34 PM
58	Why would you need to measure this at all?	5/16/2018 3:27 PM
59	species evenness	5/16/2018 3:18 PM
60	Mesure of social and economic benefits (and losts) by local people	5/9/2018 9:50 PM

Q8 Please state your level of agreement with the following statements

Answered: 311 Skipped: 3



	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE	TOTAL
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Perception and valuation of non-native species

SurveyMonkey

Non-native species should be conserved because they may provide useful function ("ecosystem services") in the future	8.04% 25	23.79% 74	40.19% 125	21.22% 66	6.75% 21	311
Including non-native species as part of biodiversity lowers conservation standards ("shifting baseline" effect) for society	11.29% 35	28.71% 89	25.81% 80	26.13% 81	8.06% 25	310
The distinction between native and non-native species is artificial and conter-productif	7.74% 24	19.35% 60	19.35% 60	29.03% 90	24.52% 76	310