CLIP-C DELIVERABLE (D -N°: 8.1)

Assessment of conceptual models and impact indicator compatibility

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Abstract

Deliverable 8.1 aims at assessing indicators' degree of compatibility. The assessment utilizes the compilation and review of 89 climate impact indicators conducted by D7.1.

Six key compatibility determinants were identified and all D7.1 indicators were assessed in combination with each other, yielding 3.916 distinct pairs of indicators. This comprehensive assessment is an important first step for developing tailor-made comparison, aggregation and exploration tools in Tasks 8.2 and 8.3 and for developing guidance to users on selecting and relating indicators to each other.

The majority of fully documented indicators included in the D7.1 database are compatible with each other when analyzing them for each of the six compatibility determinants. But there are still many missing values, so that an update of the assessment is foreseen when the D7.1 metadata database is more complete and all indicators that are currently being calculated in WP5 and WP6 respectively are included as well.

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Executive Summary

Aim and Objective

Deliverable D8.1 represents an intersection point between indicator documentation (WP7) and indicator exploration (WP8). The aim is to analyze the indicators documented in WP7 and determine to which degree they are compatible with one another in order to inform the development of tools for indicator exploration and aggregation (see MS34).

Deliverable D8.1 therefore needed to develop and apply a methodology which operationalizes the degree of compatibility between indicators. For this each of the 89 climate impact indicators compiled within the framework of D7.1 had to be analyzed in relation to all other indicators.

Results

Six determinants of indicator compatibility were identified. For each determinant the relevant issues were discussed and a suitable compatibility classification scheme was developed. For each determinant all climate impact indicators currently included in the indicator database of D7.1 were related to each other and assessed in regard to their degree of compatibility.

As of today the majority of fully documented pairs of indicators from D7.1 are compatible in regard to time periods, spatial extents, treatment of adaptive capacity, underlying scenarios, data types and conceptual frameworks when considered separately. Of course mere compatibility between particular indicators does not necessarily mean that it makes sense to compare or combine them. Therefore the results of D8.1 provide only a first basis for later on developing more in-depth guidance for users on how to meaningfully relate indicators to each other using the tools to be developed in WP8.

However, in total most indicator pairs contained missing values because the D7.1 indicator database is still evolving. The compatibility assessment will therefore need to be updated at a later stage when the metadata of D7.1 are more complete and the indicators and datasets developed within the CLIP-C consortium are included as well.

Perspectives

Deliverable D8.1 is a necessary preparatory step for the development of tools in Tasks 8.2 and 8.3. The methodology and preliminary results of the indicator compatibility assessment confirm the feasibility of comparing and combining climate impact indicators in these subsequent tasks. In the coming months the authors of D8.1 will need to work closely with WP7 concerning completion of the required metadata as well as WP5 and WP6 concerning metadata of the soon to be provided newly calculated indicators. On this basis a full update of the compatibility assessment is foreseen.

1. Indicator compatibility: Relevance and methodological approach

The tools to be developed by WP8 build on the indicators collected and documented by WP7. These indicators are based on different types of observation, emission scenarios, concentration pathways, climate models and impact models, thus reflecting the heterogeneity of methodological approaches existing within the climate change and impact communities. While this poses no major problems at the individual impact indicator level, special care needs to be taken when relating impact indicators to each other or creating composite indicators: It could easily happen that certain indicators are based on incompatible conceptual frameworks, methodologies or data types and cannot or should not be related to each other. For this reason Task 8.1 compares and assesses key characteristics of all indicators compiled by Task 7.1 in order to determine their degree of compatibility. This is important to consider in the subsequent tasks of WP8 in which indicators are e.g. compared, ranked and aggregated with each other.

The term compatibility is used here to describe a measure of similarity between two or more indicators in regard to dimensions that are important for relating these indicators to each other. A higher degree of compatibility is usually required for purposes of combination of indicators than for a mere comparison of indicators. Of course, the compatibility of indicators comprises a range from no compatibility to full compatibility. This is because climate change and corresponding impact indicators differ in many aspects as they have been developed for different purposes, with different methodologies and different underlying data. For example, Deliverable D7.1 described and analysed a total of 89 relevant indicators in regard to 37 different criteria.

But mere differences between indicators do not necessarily result in incompatibility. Therefore, the D7.1 list of criteria, which was jointly developed by WP7 and WP8 partners, was reviewed again in order to identify which criteria are crucial determinants of indicator compatibility. Six determinants were identified: a) underlying conceptual frameworks, b) treatment of adaptive/coping capacity, c) underlying emission scenarios, d) type of underlying data, e) overlap of time periods and f) overlap of spatial extent. Note that determinants a) and b) do not necessarily preclude comparison, while determinants c) to f) may preclude some combination but not comparison.

For each determinant the possible characteristics were discussed theoretically and broadly classified into full compatibility, restricted compatibility and no compatibility (see Chapter 2).

2. Determinants of indicator compatibility

Conflicts in relating or combining indicators can have various origins concerning conceptual and methodological issues as well as data related issues.

In the following sections six determinants of compatibility are described and discussed, starting with the more complex conceptual determinants before covering the simpler data related determinants. For each determinant the possible combinations of attributes are presented and illustrated in a table that at the same time proposes a classification from full compatibility via restricted compatibility to no compatibility.

2.1 Underlying conceptual frameworks

Each indicator on climate change impacts is explicitly or implicitly based on a particular conceptual framework, i.e. its underlying key concepts and the presumed relationships between them. A conceptual framework can be considered a kind of 'logical blue print' of an indicator, which is subsequently operationalised by specific methodological instructions on how to measure and/or calculate the indicator. The underlying conceptual frameworks therefore define at the most fundamental level whether two indicators share similar concepts and assumptions and are thus conceptually compatible with each other.

Within the context of climate change impact and vulnerability studies two main conceptual frameworks that are in common use can be identified:[1] The climate change framework as e.g. defined in the IPCC 4th Assessment Report and the disaster risk framework as e.g. underlying the UN International Strategy for Disaster Reduction. Both frameworks allow to capture climatic phenomena and how they impact on natural and socioeconomic systems. They also use similar and in some cases even the same terminology. Nevertheless, there are marked differences between the two frameworks which shall be discussed further below.

[1] For a systematic analysis of variations between conceptual frameworks of climate change vulnerability see Costa/Kropp 2012.

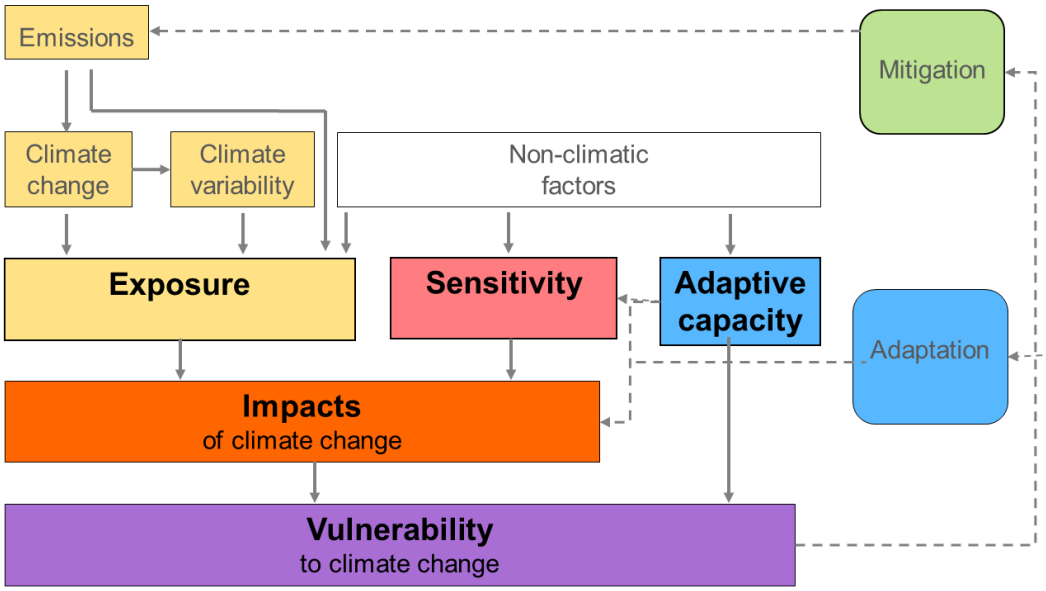


Figure 1: The IPCC climate change framework (based on Füssel and Klein, 2006)

In order to better understand key differences between these two frameworks, one needs to first identify the main components and interrelations within each framework:

Figure 1 depicts the main concepts and linkages of the climate change framework. According to this framework rising anthropogenic greenhouse gas emissions contribute to global warming and thus to climate change. This anthropogenic contribution runs parallel to natural climate variability. The resulting climate changes vary geographically, thus for example each region has a different exposure to climate change. In addition, each region has distinct physical, environmental, social, cultural and economic characteristics that result in different sensitivities to climate change. Together exposure and sensitivity determine the possible impact that climatic changes may have on a region. However, a region might in the long run be able to adjust. This adaptive capacity enhances or counteracts the climate change impacts and thus leads to a region's overall vulnerability to climate change. On the other hand, climate mitigation measures are intended to reduce greenhouse gas emissions and thus ultimately diminish the exposure to climate change.

In contrast, Figure 2 depicts the main elements of the disaster risk framework. On the one hand it comprises a hazard (e.g. flood event) that is characterised by a certain intensity and probability of occurrence. The second main concept is also called vulnerability, but here vulnerability is defined as "the propensity or predisposition to be adversely affected" and includes all elements exposed to a hazard, their particular susceptibility to be affected and "their capacity to anticipate, cope with, resist, and recover from the adverse effects of physical events (Field et al. 2012, 32). Finally, the risk is a function of the characteristics of the hazard and the vulnerability of the area, assets or persons exposed to the hazard.

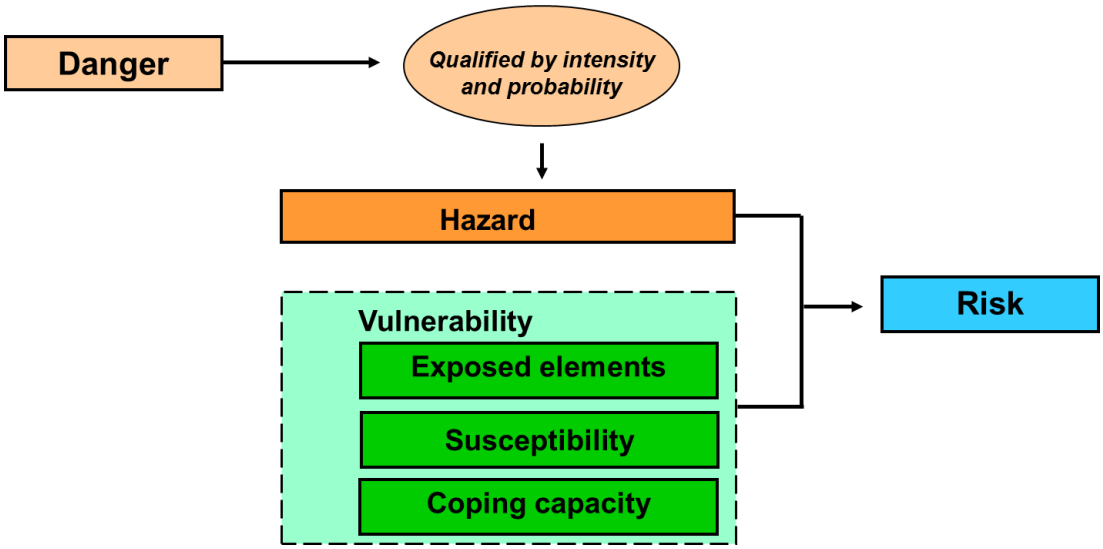


Figure 2: The ISDR disaster risk concept

Four fundamental differences between the two frameworks can be identified:

- The disaster risk framework deals only with disastrous events, which are typically rapid onset events like river floods. The climate change framework comprises all kinds of climate related changes, including small and creeping changes. Such changes can also be positive (e.g. higher agricultural output due to e.g. warmer and wetter regional climate), whereas the disaster risk framework only captures negative consequences.
- In the disaster risk framework the probability and intensity of a hazard is statistically determined on the basis of empirical data of past hazardous events. The problem is, however, that climate change may alter these probabilities (see e.g. Rahmstorf/Coumou 2011). In contrast, the climate change framework is not concerned with individual events and uses model-based projections of future climate which typically refer to averages of several decades (e.g. mean annual rainfall for the time period 2071-2100) - and not probability estimates of a particular climate event.
- The disaster risk framework typically uses small-scale empirical data in order to precisely estimate the risks for e.g. particular pieces of land, buildings or persons. The climate projections used by scientists in the climate change framework, however, are typically at a much lower spatial resolution and usually do not make estimates at a small-scale level.
- In the disaster risk framework vulnerability is one sub-component of risk and does not include climatic elements (i.e. the hazard). But in the climate change framework vulnerability is the final outcome of combining climate change exposure, sensitivity and adaptive capacity and therefore does comprise climatic elements.

Therefore, even though similar or the same terms are used by the two frameworks, their definitions, input variables and underlying cause-effect chains differ. The differences between the two frameworks can be understood in the light of their origin and the use for which they

have been developed.. . Thus, even though Costa and Kropp (2012) argue plausibly that, at the level of concrete application, similar indicators are used by studies based on different conceptual frameworks, the indicators are often derived quite differently and also related to other indicators in different ways. For conceptual and subsequent methodological reasons one can therefore not unreservedly combine indicators based on the climate change and the disaster risk framework. In Table 1 below only indicators sharing the same conceptual framework are therefore classified as fully compatible in this dimension. Of course this assessment only regards conceptual compatibility on a fairly general level. It may still be nonsensical to e.g. combine two particular indicators even though they arise from the same framework. Such detailed logical judgements will have to be made on a case by case basis in the respective comparison and combination tools of WP8.

Table 1: Compatibility of indicators in regard to underlying conceptual frameworks

		Indicator B based on…	
		Climate change framework	Disaster risk framework
Indicator A based on…	Climate change framework		
	Disaster risk framework		

Colour code: Green = full compatibility given, Yellow = restricted compatibility, Red = no compatibility

2.2 Underlying scenarios

Underlying each indicator on future climate change impacts are a number of fundamental assumptions e.g. regarding greenhouse gas emission and concentration levels. A consistent set of such assumptions, which include causal linkages, thresholds and resulting changes over time, are commonly referred to as a scenario. The scope of such scenarios can vary widely, i.e. whether or not they only include greenhouse gas concentration levels or emissions or underlying socio-economic projections or all of it together. Obviously it makes a big difference for the compatibility of two indicators whether they are based on similar or very different scenarios.

A short ‘history’ of fundamental scenarios used by the climate change and impact communities may help to better understand the key differences. Based on experiences with a first generation of greenhouse gas emission scenarios the Intergovernmental Panel on Climate Change (IPCC) in the late 1990s convened renowned experts to provide a general framework and facilitate the comparability of studies on climate change. This culminated in the

publication of a Special Report on Emission Scenarios (SRES, Nakicenovic & Swart 2000). The report defined a total of 40 baseline scenarios which were grouped into four scenario 'families' that differed primarily in their assumptions on future greenhouse gas pollution, land-use and socio-economic development. These SRES scenarios were thereafter widely adopted by the scientific community and became the standard building blocks of most modelling efforts. However, due to a number of weaknesses of the SRES scenarios as well as scientific advances in the understanding of greenhouse gas emissions the IPCC embarked on a new scenario approach starting in 2006. In what became known as the 'parallel modelling approach' the IPCC gave up their previous strategy of defining socio-economic and emission scenarios but instead selected four pathways of greenhouse gas concentration levels that were considered representative of the results of a wide spectrum of existing models. How these 'representative concentration pathways' (RPCs) could come about, i.e. through which policies, socio-economic developments and greenhouse gas emissions, was deliberately not fixed (as it was in the SRES scenarios). The modelling of these deeper causes of climate change was left to the socio-economic and emissions modelling community, while the climatological modelling community would – in parallel – develop models concerning the climatic effects of the RCPs.

Beyond these basic differences in approach, three particular aspects of SRES and RCP scenarios are especially important for our purposes (see Moss et al. 2010, Van Vuuren et al. 2011 for more detailed comparisons):

- SRES were developed on the basis of the scientific knowledge of the 1990s, whereas the RCPs were developed about ten years later and are more up-to-date with the current scientific state of the art concerning greenhouse gas concentration levels and radiative forcing.
- SRES are fully integrated, comprehensive scenarios that comprise projections on socio-economic developments, land-use changes, greenhouse gas emissions and radiative forcing changes. In contrast, RCPs focus only on greenhouse gas concentrations and radiative forcing levels – they do not contain or make specific assumptions on the role or drivers of socio-economic or ecological components.
- SRES do not explicitly includeclimate change mitigation policies The four RCPs, however, already include some basic assumptions regarding different mitigation policies and their effects on greenhouse gas trends, but most importantly they allow for testing different combinations of mitigation policies and socio-economic developments.

As a consequence of the above, the greenhouse gas emissions underlying the SRES and RCP scenarios are not the same. . Figure 3 shows the RCP trajectories for CO_2, CH_4 and SO_2 as coloured lines, the 90th and 98th percentiles of all available models as grey shaded areas and the SRES projections as dotted lines. It becomes clear that the spectrum, slope and temporal characteristics of the SRES and RCP scenarios are sometimes similar (e.g. for CO_2) but in other cases diverge quite substantially. These differences would have corresponding impacts on climatic variables and subsequently on environmental and socio-economic systems. It

could therefore be inappropriate to combine indicators whose underlying scenarios are based on fundamentally different scenarios. On the other hand, the diagrams also show that certain RCPs are in some respects quite similar to certain SRES and could therefore meaningfully related to each other. But in dealing with indicators whose underlying scenarios are fundamentally different one should be careful not to make inappropriate combinations or draw conclusion that are artefacts which arise because of different underlying assumptions.

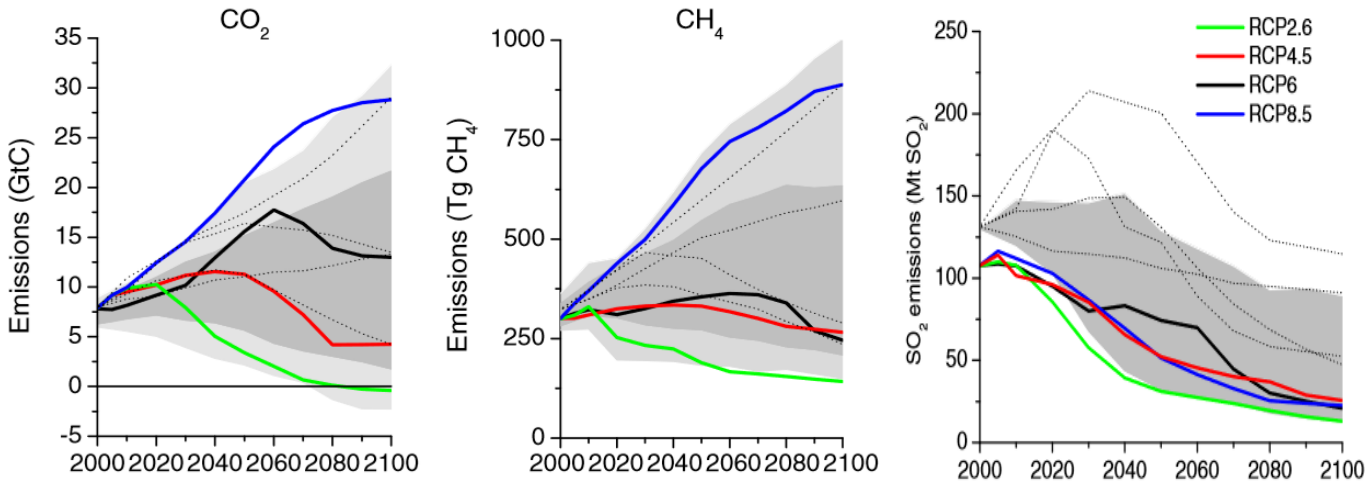


Figure 3: Greenhouse gas emission trajectories of SRES (dotted lines) and RPCs (coloured lines) (Van Vuuren et al 2011, 21f.)

Therefore only indicators with the same underlying scenario type (SRES or RCP) are considered fully compatible with one other: If two indicators share the exact same scenario (e.g. SRES A1B) they are fully compatible and one can compare, for example, the sensitivity of the two indicators to the climate change implied by the scenario or one can, if a combination is otherwise meaningful, derive composite indicators. But in case they share the same scenario type but differ in the specific scenario that is used (e.g. RCP 2.6 and RCP 4.5) their compatibility is restricted, i.e. they might be used for purposes of comparison but not for combination of indicators. As discussed above, a special case of limited compatibility may exist for broadly similar RCP and SRES scenarios: Even though there are significant differences between the RCP and the SRES scenarios semi-quantitative comparisons may still be acceptable, for example impacts derived from RCP8.5 may on a general level be compared with impacts based on SRES A1FI. However, due to the information available in the indicator metadata of D7.1 the assessement grid presented in Table 2 only considers what type of scenario (e,g. SRES or RCP) an indicator is based on and does not take into account which particular scenario is used.

Table 2: Compatibility of indicators in regard to underlying scenarios

	SRES		RCP		other	
	same	different	same	different	same	different
SRES						
RCP						
other						

Colour code: Green = full compatibility given, Yellow = restricted compatibility, Red = no compatibility

2.3 Treatment of coping/adaptive capacity

Another key determinant of indicator compatibility regards the treatment of coping or adaptive capacity. These two types of capacity are actually based on slightly different concepts. Coping capacity refers to the "ability of people, organizations and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters" (UN ISDR 2009). Adaptive capacity, however, is commonly defined as the capacity for "adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates, harms or exploits beneficial opportunity" (IPCC 2007). The differences are clearly rooted in the different conceptual frameworks in which the two terms are used: Coping capacity is concerned with managing or reducing the effects of disasters, whereas adaptive capacity focuses on adapting to negative as well as positive effects of future climatic conditions. Nevertheless, the goals and effects of both capacities are similar, i.e. they both serve to enhance the functioning of potentially affected systems by moderating harmful effects of adverse climate phenomena and – in the case of adaptive capacity – by making use of positive climate-induced development opportunities.

It obviously makes a big difference whether a particular climate impact indicator has coping or adaptive capacity already 'built in' or not, as the impact values would increase or decrease respectively. It is therefore important to find out if coping/adaptive capacity are explicitly or implicitly included in a particular impact indicator. In general, only those impact indicators that both include or both do not include these moderating capacities are fully compatible with each other.[2] Table 3 gives an overview of possible combinations and their consequences for indicator compatibility. The information in the indicator database of D7.1 does not

differentiate between coping and adaptive capacity, which is why the two are not considered separately in the table.

Of course it can be meaningful to *compare* two indicators that differ in regard to adaptive/coping capacity, but clearly one should not combine them, e.g. in a composite indicator.[2]

Table 3: Compatibility of indicators regarding inclusion of adaptive or coping capacity

		Indicator B includes adaptive or coping capacity…	
		yes	no
Indicator A includes adaptive or coping capacity…	yes		
	no		

Colour code: Green = full compatibility given, Yellow = restricted compatibility, Red = no compatibility

2.4 Type of underlying data

Most climate impact indicator make use of and further process already existing data, e.g. interpolating on the basis of data from a limited number of weather stations. Such data processing techniques are often employed precisely in order to improve indicator compatibility, e.g. when two indicators initially did not have the same geographical resolution or coverage. However, serious compatibility problems arise when the underlying data (or the newly calculated data) of two indicators are of completely different types, namely observed data and modelled data. One cannot unreservedly compare or combine modelled data for future time periods with observed data of the past even if they refer to the same indicator (e.g. annual mean temperature), because the differences between the values of the two datasets are most likely primarily due to underlying methodological differences. No compatibility problems would arise only if the modelled data of indicator A were based on or were bias-

[2] All of the above discussions relate to indicators that already combine elements of climate and sensitivity or vulnerability. Obviously, a sensitivity indicator, e.g. number of persons living along a river below a certain flood height, and as such does not contain any element of adaptive capacity can meaningfully be related to flood height projections that already incorporate adaptation measures. But tier 3 indicators included in the indicator documentation of D7.1 are already 'combined' indicators, i.e. already incorporate some kind of climate and sensitivity/vulnerability.

corrected with exactly the observed data of indicator B. Of course these are ideal-type considerations that in practice may sometimes be handled more pragmatically (see below).

Table 4 only indicates full compatibility when indicators with the same underlying data type are related to each other. When indicators with modelled data and indicators with observed data are related to each other, the two instances referred to above are distinguished: If the modelled data utilized the observed data of the other indicator then full compatibility is indicated, if however no or other observed data were used for the modelling then it is assumed that compatibility is severely restricted or not given at all.

This logically 'pure' categorization may, however, be too restrictive. Of course it is always possible (and illuminating) to compare model results to observation data – and this will clearly be possible in the comparison tool to be developed by WP8. One can always compare very different kinds of data. But for possibly combining indicators the compatibility requirements are necessarily higher. Nevertheless, in scientific practice combining indicators that mix model results and observed data are sometimes only considered riskier (but not completely "forbidden") than combining data that have been sampled in exactly the same way. Note also, that mere observation does not necessarily make data fully compatible – if a particular variable has been sampled on an hourly base and another with a frequency of once a month the two indicators may be incompatible. The categorization presented in Table 4 has to be considered as primarily oriented towards combination of indicators. It is also at a fairly general level (based on the information available in D7.1) and would still require detailed case by case judgement before including particular indicators in the respective WP8 comparison and combination tools.

Table 4: Compatibility of indicators in regard to underlying data type

		Indicator B based on…		
		observed	modelled	
			based on observed data	based on other data
Indicator A based on…	observed			
	modelled			

Colour code: Green = full compatibility given, Yellow = restricted compatibility, Red = no compatibility

2.5 Overlap of time periods

Another key determinant of indicator compatibility concerns the time periods that are covered by the respective indicators. Obviously indicators have different temporal resolutions, e.g. daily, monthly, seasonal or annual resolution. These differences can be harmonized, however, through post-processing that scales up the data of the indicator with the higher temporal resolution. Therefore different temporal resolutions of two indicators are not necessarily problematic from a compatibility point of view.[3]

It is crucial to have adequate temporal overlap of the time periods that are covered by two indicators that are to be compared or combined. Of course one can always *compare* indicators that refer to different intervals or time periods. Note, however, that for manyclimate change related indicators a minimum time period of 20 or 30 years is recommended in order to smoothen out natural weather fluctuations. Ideally then, for *combining* two indicators they should also have an overlap of at least 20 years.

Table 5 classifies indicator compatibility regarding temporal overlap into three classes: Full compatibility exists when the overlap is 20 years or more, restricted compatibility with an overlap of 10-20 years and no compatibility when there is less than 10 years of temporal overlap. Again, note that this refers primarily to a possible combination of indicators. Obviously one can always make comparisons regardless of time overlap or 'distance' in time.

Table 5: Compatibility of indicators in regard to temporal overlap

Overlap ≥ 20 years	Overlap 10 to < 20 years	Overlap < 10 years

Colour code: Green = full compatibility given, Yellow = restricted compatibility, Red = no compatibility

2.6 Overlap of spatial extent

Arguably the second most important characteristic of climate impact indicators concerns their spatial reference. In fact there is no standard spatial reference or spatial resolution that all climate impact indicators conform to. For example, indicators have different grid sizes or refer to administrative units at different levels or use geographically defined areas such as river basins as main analytical units. Thus one finds a great variety of spatial units and resolutions that are suitable and often tailor-made for specific research and policy purposes – but these differences impede immediate comparison or combination of indicators. With

[3] It may be problematic if indicator A is based on practically continuous monitoring whereas indicator B is based on infrequent measurements. If you can average indicator A to B's cruder level they may not be compatible if the phenomena that indicator B is indicating has high frequency dynamics.

appropriate post-processing techniques and efforts it is possible, however, to harmonise most datasets that initially have different spatial units or resolutions. Thus different spatial resolutions pose no fundamental problem for indicator compatibility.

But differences in regard to spatial extent or coverage pose a more serious problem and may make two indicators incompatible for further comparison or combination. Of course if there are two datasets of the same indicator (e.g. yields of a particular crop affected by drought) that nevertheless cover different parts of Europe (e.g. Scandinavia and Southern Europe) then there would be full compatibility. In fact, such geographical comparisons are probably one of the most common applications in climate change impact assessments. However, if completely different indicators are used (e.g. crop yields and heavy rainfall days) then comparisons are only possible if the two datasets at least relate to the same spatial area. Otherwise, if the two indicators/datasets differ too much both substantive content and spatial extent they may become only partly compatible or even imcompatible. But such definitive determination requires careful assessment on a case by case basis.

Since the CLIP-C project aims at providing and analysing climate impact data for all of Europe, Table 6 indicates full compatibility when both indicators cover the entire globe, the northern hemisphere or Europe. Restricted compatibility is indicated whenever one indicator covers only a sub-European area but the other indicator covers the globe, northern hemisphere or Europe as a whole. No compatibility is seen if both indicators have a sub-European extent and these do not match each other (as in the example given above). It might be, however, that two indicators refer to the same sub-European region (e.g. the same country), in which case the two indicators would be fully compatible (even though their spatial coverage is more limited than what CLIP-C generally strives for).

Table 6: Compatibility of indicators concerning spatial extent

		Indicator B based on…			
		Global level	Northern Hemisphere / Europe	Sub European level	
				same	different
Indicator A based on…	Global level				
	Northern Hemisphere / Europe				
	Sub European level				

Colour code: Green = full compatibility given, Yellow = restricted compatibility, Red = no compatibility

3. Assessment of indicator compatibility

The assessment of indicator compatibility took place for all determinants defined in Chapter 2. For each compatibility determinant all 89 indicators documented in D7.1 were arranged in a matrix yielding 3916 distinct pairs of indicators. These pairs were then analysed and classified as described in Chapter 2. The following sections only present summary results, whereas Annex 1 contains the completely filled in matrix for each determinant.

3.1 Underlying conceptual frameworks

The major finding regarding underlying conceptual frameworks is that 83% of all indicator pairs exhibit full compatibility. All tier 1 and tier 2 indicators are compatible with both major conceptual frameworks considered. And one third of the tier 3 indicator pairs have full compatibility (as they are either fully based on the climate change vulnerability framework or on the disaster risk framework).

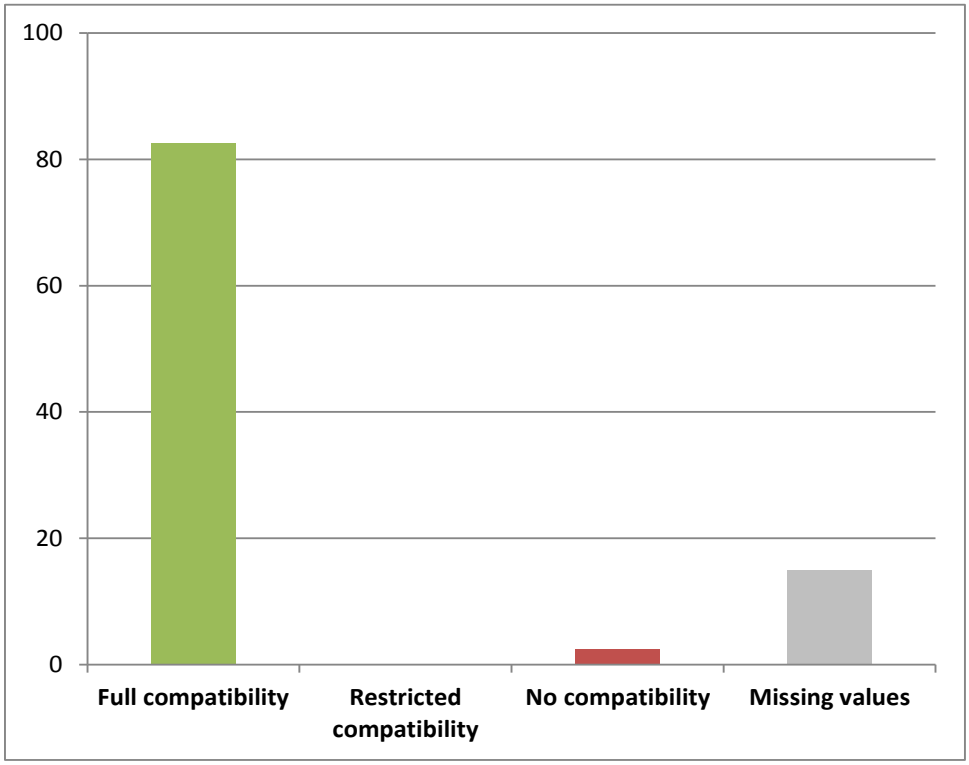


Figure 4: Results of the compatibility assessment regarding conceptual frameworks (% of indicator pairs, N = 3916)

3.2 Underlying scenarios

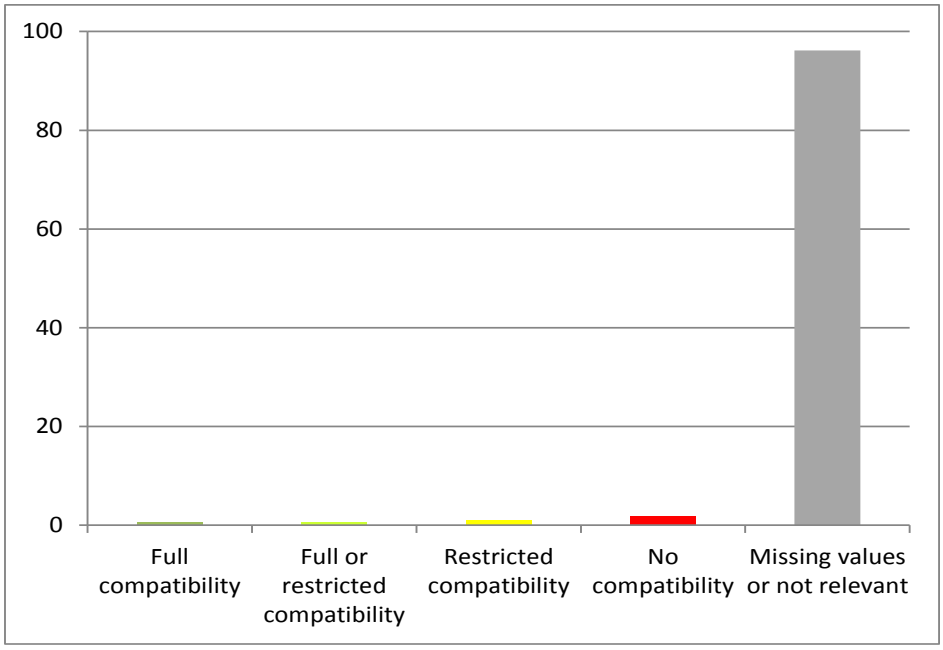


Figure 5: Results of the compatibility assessment regarding underlying scenarios
(% of indicator pairs, N = 3916)

The results regarding underlying scenarios are not really robust at this stage, because for the vast majority of indicators (mainly tier 1 and tier 2) the metadata in D7.1 at this stage did not specify if the indicators related to observations and/or future projections and thus no underlying scenarios were specified. Hence 96% indicator *pairs* that contained such indicators were classified as either having missing values or as not relevant (in case the indicators might actually relate to observations that obviously do not require scenarios). For the update of this deliverable the metadata providers for the individual indicators of D7.1 need to investigate and provide clear information on this aspect.

Currently only three indicators are based on Representative Concentration Pathways (RCPs), while 13 indicators are based on the SRES scenarios and two indicators have other underlying climate scenarios. Whenever both of the two assessed indicators are either based on SRES or RPC but without indication of which specific scenario (e.g. SRES A1B, RCP 2.6, etc.), the respective indicator pair was classified as either fully or partly compatible (coloured in yellow and green stripes in the analytical matrix of Annex 1). Taken together and focusing on the indicators with full information on this aspect, more indicator pairs exhibit full or partial compatibility than incompatibility.

3.3 Treatment of coping/adaptive capacity

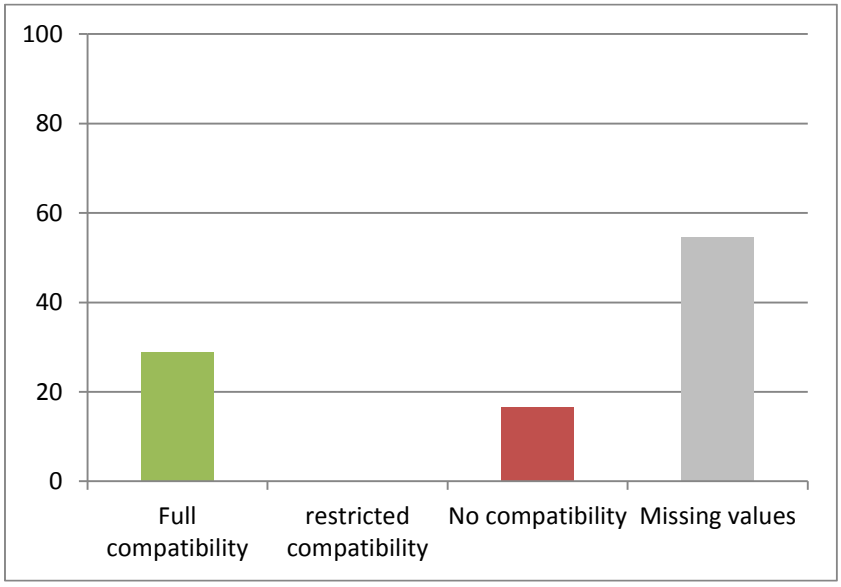


Figure 6: Results of the compatibility assessment regarding coping/adaptive capacity (% of indicator pairs, N = 3916)

Currently 61 of the 89 indicators of D7.1 contained metadata on whether they already incorporated adaptive or coping capacity: There are 48 indicators that include adaptive or coping capacity and 13 indicators that do not. Nevertheless, even though less than one third of all indicators had no metadata on this aspect, this translated into a total of 55% of indicator *pairs* that had to classified as having missing values, because at least one indicator had no metadata in this regard.

3.4 Type of underlying data

The results regarding underlying data type are very similar: For 53 indicators the D7.1 indicator database included the necessary metadata. 35 of these indicators are based on observed data and 18 on modelled data. No information is available for the remaining 36 indicators.[4]

For the 3916 pairs of indicators this resulted in a total of 65% of indicator pairs that had to be classified as having missing values, because at least one indicator had no metadata in this regard (see Figure 7). Hopefully this figure will decrease once the D7.1 indicator database has matured further. Figure 7 also shows, that at this stage the number of indicator pairs with full compatibility and with no compatibility is fairly balanced.

[4] It should be noted, however, that as described in Chapter 2 indicators can theoretically be seen as compatible if indicator A is based on observed and indicator B on modelled data, as long as the modelled data has the same (observed) data basis or is bias corrected with the observed data. Unfortunately the information currently included in D7.1 is not sufficient to clarify if such cases exist among the indicators that are documented.

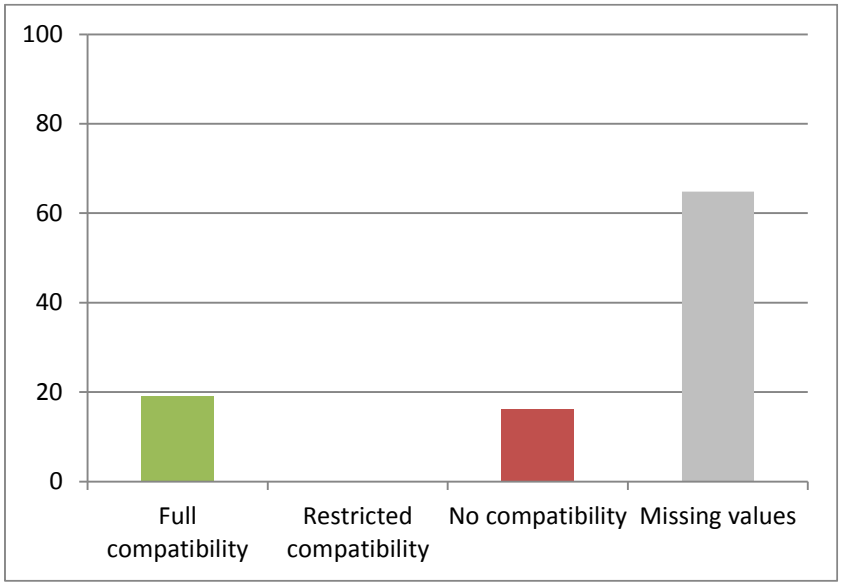


Figure 7: Results of the compatibility assessment regarding underlying data
(% of indicator pairs, N = 3916)

3.5 Overlap of time periods

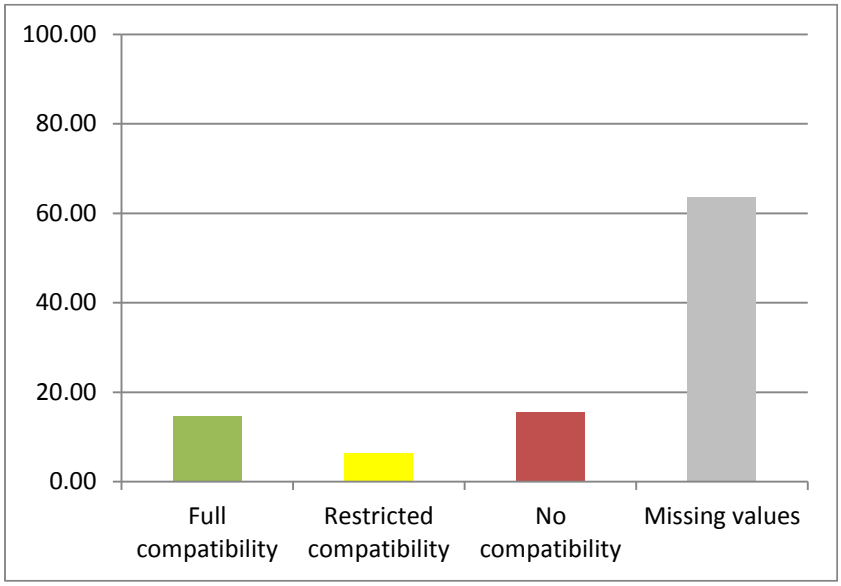


Figure 8: Results of the compatibility assessment regarding overlap of time periods
(% of indicator pairs, N = 3916)

For 51 indicators the D7.1 indicator database contained the required metadata, 38 indicators have missing values in this regard. As for the overlap of time periods an overlap of at least 20 years was regarded as fully compatible and a time period between 10 to 20 years as partially compatible. However, the assessment showed that the time periods covered by six indicators is only ten to 19 years and for four indicators even less than ten years. These indicators can therefore not reach full compatibility with other indicators according to our temporal overlap classification.

Looking at indicator pairs (see Figure 8) the results are heterogeneous. For 64% of indicator pairs at least one indicator had missing values. Of all other (fully documented) indicator pairs full compatibility (15%) and restricted compatibility (6%) prevail over no compatibility (16%).

3.6 Overlap of spatial extent

The D7.1 indicator database contained metadata on spatial extent for only 44 of the 89 indicators. Many of these indicators exist either for the global level (G), the Northern Hemisphere (NH) or Europe (E) and therefore are (as outlined in Chapter 2) fully compatible with each other. Eight indicators only cover a part of Europe (Sub-European level, SE) and have restricted compatibility with G/NH/E indicators. This applies especially to indicators that exist only for individual European rivers (e.g. ID71). There are several cases in which it is not certain whether an indicator exists on a sub-European or European level. In these cases special care needs to be taken when working with the background data later on in the CLIP-C project

On the other hand, many of the 45 indicators with no information on spatial extent in the D7.1 database are described as indices without a particular database. In principle, with an appropriate database, these indices could have the required spatial extent to make them fully compatible with other indicators. But at the moment they are responsible for the main bulk of 'missing value' indicator pairs (see Figure 9 below).

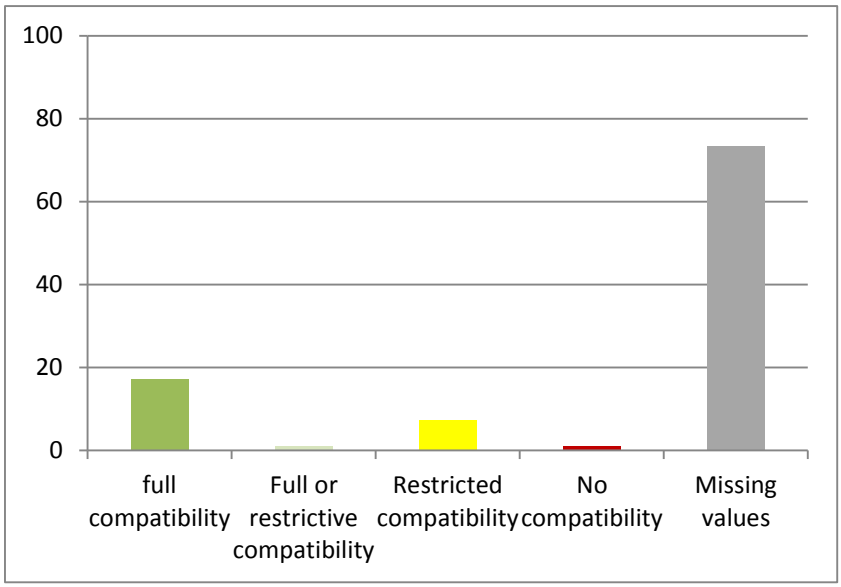


Figure 9: Results of the compatibility assessment regarding overlap of spatial extent (% of indicator pairs, N = 3916)

4. Summary and Outlook

Methodology

Building on WP7 Deliverable D8.1 aimed to conduct an indicator compatibility assessment. The assessment utilized the review of climate change and impact indicators (D7.1) and analyzed the indicator metadata in order to provide a foundation for the development of tools for indicator exploration (Task 8.2) and aggregation (Task 8.3). This deliverable therefore represents an intersection point between indicator documentation and indicator exploration.

The main objective of Deliverable D8.1 was to analyze all indicators so far documented in WP7 and determine to which degree they are compatible with one another for comparing and possibly combining them in Tasks 8.2 and 8.3. The term compatibility was used here as a measure of similarity between two or more indicators in regard to dimensions that are important for relating these indicators to each other. A higher degree of compatibility is obviously required for purposes of combination of indicators than for a mere comparison of indicators. The compatibility of indicators comprises a range from no compatibility to full compatibility. Of course one has to always keep in mind that full compatibility between two indicators does not in any way guarantee scientifically meaningful comparison or combination of indicators.

For assessing the degree of compatibility the main challenge was that indicators can have various origins concerning conceptual, methodological as well as data related aspects. In this regard six key determinants were identified based on the criteria established and analyzed in D7.1. These determinants are: a) underlying conceptual frameworks, b) treatment of adaptive capacity, c) underlying scenarios, d) type of underlying data, e) overlap of time periods and f) overlap of spatial extent. Basically determinants a) and b) do not necessarily preclude comparison, whereas determinants c) to f) may preclude some combination but not comparison.

For each determinant the possible characteristics were discussed theoretically and broadly classified into full compatibility, restricted compatibility and no compatibility (see Chapter 2). As the documented metadata for many indicators included in D7.1 is still evolving, the current version of D8.1 refrained from conducting an overall compatibility assessment that combined all compatibility determinants together. This is foreseen when the required metadata are more complete and the indicators developed within the CLIP-C consortium are provided.

After conducting the compatibility assessment it became apparent that the methodology described in Chapter 2 was suitable for analyzing different degrees of compatibility. It is of great use for upcoming work steps in WP8 and also clearly indicated specific demands for improving the documentation of particular indicators in the D7.1 database.

Results

For each of the six determinants all climate impact indicators currently included in the indicator database of D7.1 were related to each other and classified in regard to their degree of compatibility. In total 3.916 pairs of indicators were analysed in regard to each of the six compatibility determinants. As the D7.1 indicator database is still evolving there most likely needs to be an update and expansion of the compatibility assessment once all climate impact indicators for the CLIP-C portal are fully available and documented. In the following the main results concerning each compatibility determinant are summarized.

a) Underlying conceptual framework

Indicators based on fundamentally different conceptual frameworks are not compatible with one another. But it turned out that more than 80% of indicator pairs exhibit full compatibility. Only a few indicators of D7.1 have missing values in this respect.

b) Underlying scenarios

Almost 96% of indicator pairs had to be classified as either containing 'missing values' or that scenarios are irrelevant for them because the indicators relate to observation data (that obviously are not based on scenarios). It will be crucial for the update of this assessment to improve the D7.1 indicator database in this respect in order to have more complete and robust results.

c) Treatment of adaptive capacity

Most fully documented indicator pairs are compatible (29%) as they either both do or both do not include adaptive or coping capacity. However, about 55% of indicator pairs had to be classified as 'missing values' because at least one indicator had no metadata in this regard.

d) Type of underlying data

Similarly, the majority of fully documented indicator pairs (19%) have full compatibility because both indicators are either observation data or both are based on modelled data. This compares to 16% of indicator pairs with no compatibility. But 65% of indicator pairs contained missing values for at least one of the indicators – a situation that will hopefully improve as the D7.1 indicator database evolves in the coming months.

e) Overlap of time periods

The assessment of compatibility regarding temporal overlap also yielded heterogeneous results: 21% of indicator pairs have full or partial compatibility, compared to 16% with no compatibility. No compatibility was defined to be the case when two indicators have less than ten years of overlapping time period, partial compatibility was defined as having less than 20 but at least ten years of overlap. Again, more than 60% of indicator pairs had to be

categorized as having missing values because the D7.1 database did not contain metadata on this aspect for at least one indicator.

f) Overlap of spatial extent

The assessment regarding spatial extent showed that 26% of indicator pairs have full or partial compatibility as they cover the globe, the northern hemisphere or all of Europe. Less than 1% of indicator pairs have no compatibility at all. Currently about 73% of indicator pairs had to be classified as containing 'missing values'; many of these pairs include indices that – at least theoretically – could cover the necessary full European extent, given the respective data basis.

Thus, as of today the majority of fully documented indicator pairs are completely compatible in regard to the analysed compatibility determinants. Typically, however the largest group of indicator pairs contains missing values. It is hoped that this group will diminish as the D7.1 indicator database adds more metadata on the required metadata criteria.

It needs to be emphasized again that mere compatibility between particular indicators does not necessarily mean that it makes sense to compare or combine them. Therefore the results of D8.1 provide only a first basis for later on developing more in-depth guidance for users on how to meaningfully relate indicators to each other using the tools to be developed in WP8.

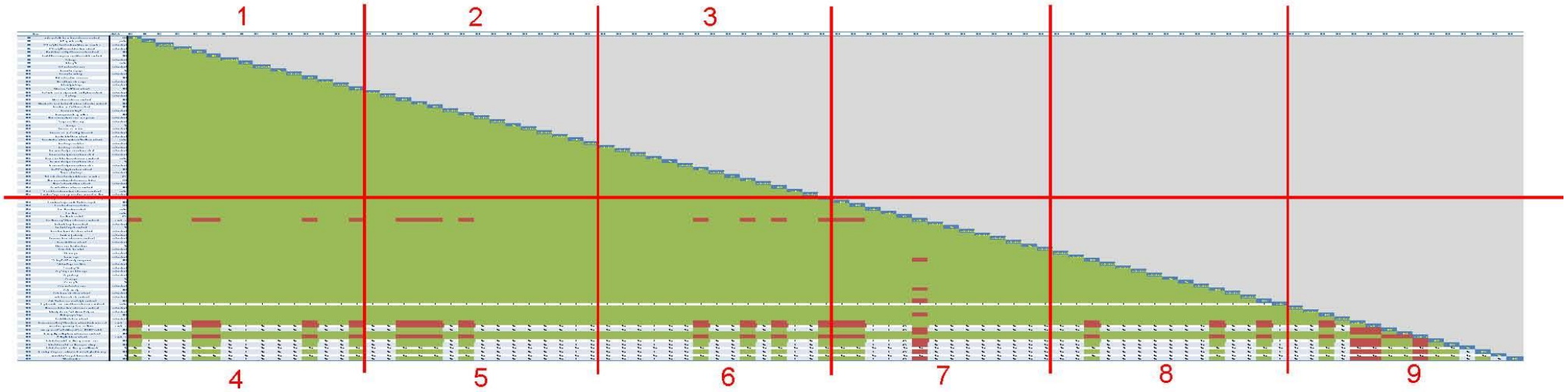
Outlook

Deliverable D8.1 is a necessary preparatory step for the development of tools in Tasks 8.2 and 8.3. The methodology and preliminary results of the indicator compatibility assessment confirm the feasibility of comparing and combining climate impact indicators in theses subsequent tasks. In the coming months the authors of D8.1 will need to work closely with WP7 concerning completion of the required metadata as well as WP5 and WP6 concerning metadata of the soon to be provided newly calculated indicators. On this basis a full update of the compatibility assessment is foreseen.

Annex I: Full compatibility matrices for all determinants

1. Underlying conceptual frameworks

The following overview depicts the compatibility assessment in regard to the underlying conceptual frameworks of all indicators. The red numbers mark nine single sheets, which are presented in detail on the following pages.



Underlying conceptual frameworks (1)

	Name	attribute	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13	ID 14	ID 15
ID 1	Arctic and Baltic Sea ice (observations / projections)	IPCC	IPCC														
ID 2	Bathing water quality	unclear		unclear													
ID 3	Chlorophyll in transitional, coastal and marine waters	not applicable			not applicable												
ID 4	Chlorophyll-a concentration (observations)	not applicable				not applicable											
ID 5	Climatic favourability of tree species (projections)	IPCC					IPCC										
ID 6	Coastal flood damage and adaptation costs (projections)	IPCC						IPCC									
ID 7	Cold days	not applicable							not applicable								
ID 8	Cold nights	unclear								unclear							
ID 9	Cold spell duration index	not applicable									not applicable						
ID 10	Consecutive dry days	NA										NA					
ID 11	Consecutive wet days	not applicable											not applicable				
ID 12	Distribution of marine species	IPCC												IPCC			
ID 13	Diurnal temperature range	not applicable													not applicable		
ID 14	Extremely wet days	not applicable														not applicable	
ID 15	Floods and health (observations)	IPCC															IPCC
ID 16	Freshwater biodiversity and water quality (observations)	not applicable															
ID 17	Frost days	not applicable															
ID 18	Glaciers (observations / projections)	IPCC															
ID 19	Global and European Sea Level Rise (observations & projections)	IPCC															
ID 20	Greenland ice sheet (observations)	IPCC															
ID 21	Grow season length	not applicable															
ID 22	Growing season for agriculture	IPCC															
ID 23	Hazardous substances in marine organisms	not applicable															
ID 24	heavy precipitation days	not applicable															
ID 25	Ice days	NA															
ID 26	Lake and river ice cover	not applicable															
ID 27	Lake and river ice phenology (observed)	not applicable															
ID 28	Lake Ice Extent (observations)	not applicable															
ID 29	Land elevation below projected sea-level (observations)	unclear															
ID 30	Max 1 day precipitation	not applicable															
ID 31	Max 5 day precipitation	not applicable															
ID 32	Maximum of daily minimum temperature)	not applicable															
ID 33	Maximum of daily maximum temperature)	not applicable															
ID 34	Mean precipitation (observations and projections)	unclear															
ID 35	Minimum of daily minimum temperature	NA															
ID 36	Minimum of daily maximum temperature	not applicable															
ID 37	Moth Phenology Index (observations)	IPCC															
ID 38	Number of wet days	not applicable															
ID 39	Nutrients in transitional, coastal and marine waters	other															
ID 40	Observed development of ocean acidification	IPCC															
ID 41	Ocean heat content (observations)	not applicable															
ID 42	Permafrost (observations / projections)	IPCC															
ID 43	Precipitation extremes (observations and projections)	unclear															
ID 44	Projected change in average annual and seasonal river flow	not applicable															
ID 45	Projected change in river floods with a return period of 100 years	IPCC															

Underlying conceptual frameworks (2)

	Name	attribute	ID 16	ID 17	ID 18	ID 19	ID 20	ID 21	ID 22	ID 23	ID 24	ID 25	ID 26	ID 27	ID 28	ID 29	ID 30
ID 1	Arctic and Baltic Sea ice (observations / projections)	IPCC															
ID 2	Bathing water quality	unclear															
ID 3	Chlorophyll in transitional, coastal and marine waters	not applicable															
ID 4	Chlorophyll-a concentration (observations)	not applicable															
ID 5	Climatic favourability of tree species (projections)	IPCC															
ID 6	Coastal flood damage and adaptation costs (projections)	IPCC															
ID 7	Cold days	not applicable															
ID 8	Cold nights	unclear															
ID 9	Cold spell duration index	not applicable															
ID 10	Consecutive dry days	NA															
ID 11	Consecutive wet days	not applicable															
ID 12	Distribution of marine species	IPCC															
ID 13	Diurnal temperature range	not applicable															
ID 14	Extremely wet days	not applicable															
ID 15	Floods and health (observations)	IPCC															
ID 16	Freshwater biodiversity and water quality (observations)	not applicable	not applicable														
ID 17	Frost days	not applicable		not applicable													
ID 18	Glaciers (observations / projections)	IPCC			IPCC												
ID 19	Global and European Sea Level Rise (observations & projections)	IPCC				IPCC											
ID 20	Greenland ice sheet (observations)	IPCC					IPCC										
ID 21	Grow season length	not applicable						not applicable									
ID 22	Growing season for agriculture	IPCC							IPCC								
ID 23	Hazardous substances in marine organisms	not applicable								not applicable							
ID 24	heavy precipitation days	not applicable									not applicable						
ID 25	Ice days	NA										NA					
ID 26	Lake and river ice cover	not applicable											not applicable				
ID 27	Lake and river ice phenology (observed)	not applicable												not applicable			
ID 28	Lake Ice Extent (observations)	not applicable													not applicable		
ID 29	Land elevation below projected sea-level (observations)	unclear														unclear	
ID 30	Max 1 day precipitation	not applicable															not applicable
ID 31	Max 5 day precipitation	not applicable															
ID 32	Maximum of daily minimum temperature)	not applicable															
ID 33	Maximum of daily maximum temperature)	not applicable															
ID 34	Mean precipitation (observations and projections)	unclear															
ID 35	Minimum of daily minimum temperature	NA															
ID 36	Minimum of daily maximum temperature	not applicable															
ID 37	Moth Phenology Index (observations)	IPCC															
ID 38	Number of wet days	not applicable															
ID 39	Nutrients in transitional, coastal and marine waters	other															
ID 40	Observed development of ocean acidification	IPCC															
ID 41	Ocean heat content (observations)	not applicable															
ID 42	Permafrost (observations / projections)	IPCC															
ID 43	Precipitation extremes (observations and projections)	unclear															
ID 44	Projected change in average annual and seasonal river flow	not applicable															
ID 45	Projected change in river floods with a return period of 100 years	IPCC															

Underlying conceptual frameworks (3)

	Name	attribute	ID 31	ID 32	ID 33	ID 34	ID 35	ID 36	ID 37	ID 38	ID 39	ID 40	ID 41	ID 42	ID 43	ID 44	ID 45
ID 1	Arctic and Baltic Sea ice (observations / projections)	IPCC															
ID 2	Bathing water quality	unclear															
ID 3	Chlorophyll in transitional, coastal and marine waters	not applicable															
ID 4	Chlorophyll-a concentration (observations)	not applicable															
ID 5	Climatic favourability of tree species (projections)	IPCC															
ID 6	Coastal flood damage and adaptation costs (projections)	IPCC															
ID 7	Cold days	not applicable															
ID 8	Cold nights	unclear															
ID 9	Cold spell duration index	not applicable															
ID 10	Consecutive dry days	NA															
ID 11	Consecutive wet days	not applicable															
ID 12	Distribution of marine species	IPCC															
ID 13	Diurnal temperature range	not applicable															
ID 14	Extremely wet days	not applicable															
ID 15	Floods and health (observations)	IPCC															
ID 16	Freshwater biodiversity and water quality (observations)	not applicable															
ID 17	Frost days	not applicable															
ID 18	Glaciers (observations / projections)	IPCC															
ID 19	Global and European Sea Level Rise (observations & projections)	IPCC															
ID 20	Greenland ice sheet (observations)	IPCC															
ID 21	Grow season length	not applicable															
ID 22	Growing season for agriculture	IPCC															
ID 23	Hazardous substances in marine organisms	not applicable															
ID 24	heavy precipitation days	not applicable															
ID 25	Ice days	NA															
ID 26	Lake and river ice cover	not applicable															
ID 27	Lake and river ice phenology (observed)	not applicable															
ID 28	Lake Ice Extent (observations)	not applicable															
ID 29	Land elevation below projected sea-level (observations)	unclear															
ID 30	Max 1 day precipitation	not applicable															
ID 31	Max 5 day precipitation	not applicable	not applicable														
ID 32	Maximum of daily minimum temperature)	not applicable		not applicable													
ID 33	Maximum of daily maximum temperature)	not applicable			not applicable												
ID 34	Mean precipitation (observations and projections)	unclear				unclear											
ID 35	Minimum of daily minimum temperature	NA					NA										
ID 36	Minimum of daily maximum temperature	not applicable						not applicable									
ID 37	Moth Phenology Index (observations)	IPCC							IPCC								
ID 38	Number of wet days	not applicable								not applicable							
ID 39	Nutrients in transitional, coastal and marine waters	other									other						
ID 40	Observed development of ocean acidification	IPCC										IPCC					
ID 41	Ocean heat content (observations)	not applicable											not applicable				
ID 42	Permafrost (observations / projections)	IPCC												IPCC			
ID 43	Precipitation extremes (observations and projections)	unclear													unclear		
ID 44	Projected change in average annual and seasonal river flow	not applicable														not applicable	
ID 45	Projected change in river floods with a return period of 100 years	IPCC															IPCC

Underlying conceptual frameworks (4)

	Name	attribute	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13	ID 14	ID 15
ID 46	Projected changes in water-limited crop yield	IPCC															
ID 47	Projection of ocean acidification	IPCC															
ID 48	River floods (observation)	unclear															
ID 49	River flow	unclear															
ID 50	River flow (projected)	other															
ID 51	River flow drought (observations and projections)	disaster risk															
ID 52	Sea level change (observations)	not applicable															
ID 53	Sea level change (projections)	NA															
ID 54	Sea surface temperature (observations)	not applicable															
ID 55	Simple daily intensity	not applicable															
ID 56	Snow cover (observations and projections)	not applicable															
ID 57	Snow extent (observations)	not applicable															
ID 58	Standardized SnowPack Index	NA															
ID 59	Snow Water Equivalent	not applicable															
ID 60	Storm surges	not applicable															
ID 61	Summer days	not applicable															
ID 62	The length of thermal growing season	IPCC															
ID 63	Total wet-day precipitation	not applicable															
ID 64	Tropical nights	not applicable															
ID 65	Very heavy precipitation days	not applicable															
ID 66	Very wet days	not applicable															
ID 67	Warm days	NA															
ID 68	Warm nights	NA															
ID 69	Warm spell duration index	not applicable															
ID 70	Water scarcity	IPCC															
ID 71	Water temperature (observations)	not applicable															
ID 72	water temperature (projections)	not applicable															
ID 73	Water-limited crop productivity (projections)	IPCC															
ID 74	Irrigation water requirement (observations and projections)	unclear	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 75	Ocean acidification (observations and projections)	not applicable															
ID 76	Intensity of urban heat island with city size	not applicable															
ID 77	Heating degree-days	IPCC															
ID 78	Rainfall Deciles (observations)	not applicable															
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	disaster risk															
ID 80	Annual average damage from river floods	disaster risk		?	NA	NA			NA	?	NA	NA	NA		NA	NA	
ID 81	Average annual heat-related deaths per 100,000 habitats	IPCC		?	NA	NA			NA	?	NA	NA	NA		NA	NA	
ID 82	Growing Degree Days (observations and projections)	IPCC															
ID 83	Chilling Units (observations)	disaster risk															
ID 84	Potential impact of river flooding on major roads	IPCC		?	NA	NA			NA	?	NA	NA	NA		NA	NA	
ID 85	Potential impact of river flooding on railways	IPCC		?	NA	NA			NA	?	NA	NA	NA		NA	NA	
ID 86	Potential impact of river flooding on settlements	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 87	Percentage change in arrivals/departures due to global warming	IPCC		?	NA	NA			NA	?	NA	NA	NA		NA	NA	
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	IPCC		?	NA	NA			NA	?	NA	NA	NA		NA	NA	

Underlying conceptual frameworks (5)

	Name	attribute	ID 16	ID 17	ID 18	ID 19	ID 20	ID 21	ID 22	ID 23	ID 24	ID 25	ID 26	ID 27	ID 28	ID 29	ID 30
ID 46	Projected changes in water-limited crop yield	IPCC															
ID 47	Projection of ocean acidification	IPCC															
ID 48	River floods (observation)	unclear															
ID 49	River flow	unclear															
ID 50	River flow (projected)	other															
ID 51	River flow drought (observations and projections)	disaster risk															
ID 52	Sea level change (observations)	not applicable															
ID 53	Sea level change (projections)	NA															
ID 54	Sea surface temperature (observations)	not applicable															
ID 55	Simple daily intensity	not applicable															
ID 56	Snow cover (observations and projections)	not applicable															
ID 57	Snow extent (observations)	not applicable															
ID 58	Standardized SnowPack Index	NA															
ID 59	Snow Water Equivalent	not applicable															
ID 60	Storm surges	not applicable															
ID 61	Summer days	not applicable															
ID 62	The length of thermal growing season	IPCC															
ID 63	Total wet-day precipitation	not applicable															
ID 64	Tropical nights	not applicable															
ID 65	Very heavy precipitation days	not applicable															
ID 66	Very wet days	not applicable															
ID 67	Warm days	NA															
ID 68	Warm nights	NA															
ID 69	Warm spell duration index	not applicable															
ID 70	Water scarcity	IPCC															
ID 71	Water temperature (observations)	not applicable															
ID 72	water temperature (projections)	not applicable															
ID 73	Water-limited crop productivity (projections)	IPCC															
ID 74	Irrigation water requirement (observations and projections)	unclear	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 75	Ocean acidification (observations and projections)	not applicable															
ID 76	Intensity of urban heat island with city size	not applicable															
ID 77	Heating degree-days	IPCC															
ID 78	Rainfall Deciles (observations)	not applicable															
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	disaster risk															
ID 80	Annual average damage from river floods	disaster risk	NA	NA				NA		NA	NA	NA	NA	NA	NA	?	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	IPCC	NA	NA				NA		NA	NA	NA	NA	NA	NA	?	NA
ID 82	Growing Degree Days (observations and projections)	IPCC															
ID 83	Chilling Units (observations)	disaster risk															
ID 84	Potential impact of river flooding on major roads	IPCC	NA	NA				NA		NA	NA	NA	NA	NA	NA	?	NA
ID 85	Potential impact of river flooding on railways	IPCC	NA	NA				NA		NA	NA	NA	NA	NA	NA	?	NA
ID 86	Potential impact of river flooding on settlements	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 87	Percentage change in arrivals/departures due to global warming	IPCC	NA	NA				NA		NA	NA	NA	NA	NA	NA	?	NA
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	IPCC	NA	NA				NA		NA	NA	NA	NA	NA	NA	?	NA

Underlying conceptual frameworks (6)

	Name	attribute	ID 31	ID 32	ID 33	ID 34	ID 35	ID 36	ID 37	ID 38	ID 39	ID 40	ID 41	ID 42	ID 43	ID 44	ID 45
ID 46	Projected changes in water-limited crop yield	IPCC															
ID 47	Projection of ocean acidification	IPCC															
ID 48	River floods (observation)	unclear															
ID 49	River flow	unclear															
ID 50	River flow (projected)	other															
ID 51	River flow drought (observations and projections)	disaster risk															
ID 52	Sea level change (observations)	not applicable															
ID 53	Sea level change (projections)	NA															
ID 54	Sea surface temperature (observations)	not applicable															
ID 55	Simple daily intensity	not applicable															
ID 56	Snow cover (observations and projections)	not applicable															
ID 57	Snow extent (observations)	not applicable															
ID 58	Standardized SnowPack Index	NA															
ID 59	Snow Water Equivalent	not applicable															
ID 60	Storm surges	not applicable															
ID 61	Summer days	not applicable															
ID 62	The length of thermal growing season	IPCC															
ID 63	Total wet-day precipitation	not applicable															
ID 64	Tropical nights	not applicable															
ID 65	Very heavy precipitation days	not applicable															
ID 66	Very wet days	not applicable															
ID 67	Warm days	NA															
ID 68	Warm nights	NA															
ID 69	Warm spell duration index	not applicable															
ID 70	Water scarcity	IPCC															
ID 71	Water temperature (observations)	not applicable															
ID 72	water temperature (projections)	not applicable															
ID 73	Water-limited crop productivity (projections)	IPCC															
ID 74	Irrigation water requirement (observations and projections)	unclear	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 75	Ocean acidification (observations and projections)	not applicable															
ID 76	Intensity of urban heat island with city size	not applicable															
ID 77	Heating degree-days	IPCC															
ID 78	Rainfall Deciles (observations)	not applicable															
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	disaster risk															
ID 80	Annual average damage from river floods	disaster risk	NA	NA	NA	?	NA	NA		NA	NA		NA		?	NA	
ID 81	Average annual heat-related deaths per 100,000 habitats	IPCC	NA	NA	NA	?	NA	NA		NA	NA		NA		?	NA	
ID 82	Growing Degree Days (observations and projections)	IPCC															
ID 83	Chilling Units (observations)	disaster risk															
ID 84	Potential impact of river flooding on major roads	IPCC	NA	NA	NA	?	NA	NA		NA	NA		NA		?	NA	
ID 85	Potential impact of river flooding on railways	IPCC	NA	NA	NA	?	NA	NA		NA	NA		NA		?	NA	
ID 86	Potential impact of river flooding on settlements	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 87	Percentage change in arrivals/departures due to global warming	IPCC	NA	NA	NA	?	NA	NA		NA	NA		NA		?	NA	
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	IPCC	NA	NA	NA	?	NA	NA		NA	NA		NA		?	NA	

Underlying conceptual frameworks (7)

	Name	attribute	ID 46	ID 47	ID 48	ID 49	ID 50	ID 51	ID 52	ID 53	ID 54	ID 55	ID 56	ID 57	ID 58	ID 59	ID 60
ID 46	Projected changes in water-limited crop yield	IPCC	IPCC														
ID 47	Projection of ocean acidification	IPCC		IPCC													
ID 48	River floods (observation)	unclear			unclear												
ID 49	River flow	unclear				unclear											
ID 50	River flow (projected)	other					other										
ID 51	River flow drought (observations and projections)	disaster risk						disaster risk									
ID 52	Sea level change (observations)	not applicable							not applicable								
ID 53	Sea level change (projections)	NA								NA							
ID 54	Sea surface temperature (observations)	not applicable									not applicable						
ID 55	Simple daily intensity	not applicable										not applicable					
ID 56	Snow cover (observations and projections)	not applicable											not applicable				
ID 57	Snow extent (observations)	not applicable												not applicable			
ID 58	Standardized SnowPack Index	NA													NA		
ID 59	Snow Water Equivalent	not applicable														not applicable	
ID 60	Storm surges	not applicable															not applicable
ID 61	Summer days	not applicable															
ID 62	The length of thermal growing season	IPCC															
ID 63	Total wet-day precipitation	not applicable															
ID 64	Tropical nights	not applicable															
ID 65	Very heavy precipitation days	not applicable															
ID 66	Very wet days	not applicable															
ID 67	Warm days	NA															
ID 68	Warm nights	NA															
ID 69	Warm spell duration index	not applicable															
ID 70	Water scarcity	IPCC															
ID 71	Water temperature (observations)	not applicable															
ID 72	water temperature (projections)	not applicable															
ID 73	Water-limited crop productivity (projections)	IPCC															
ID 74	Irrigation water requirement (observations and projections)	unclear	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 75	Ocean acidification (observations and projections)	not applicable															
ID 76	Intensity of urban heat island with city size	not applicable															
ID 77	Heating degree-days	IPCC															
ID 78	Rainfall Deciles (observations)	not applicable															
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	disaster risk															
ID 80	Annual average damage from river floods	disaster risk			?	?	other		NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	IPCC			?	?	other		NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 82	Growing Degree Days (observations and projections)	IPCC															
ID 83	Chilling Units (observations)	disaster risk															
ID 84	Potential impact of river flooding on major roads	IPCC			?	?	other		NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 85	Potential impact of river flooding on railways	IPCC			?	?	other		NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 86	Potential impact of river flooding on settlements	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 87	Percentage change in arrivals/departures due to global warming	IPCC			?	?	other		NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	IPCC			?	?	other		NA	NA	NA	NA	NA	NA	NA	NA	NA

Underlying conceptual frameworks (8)

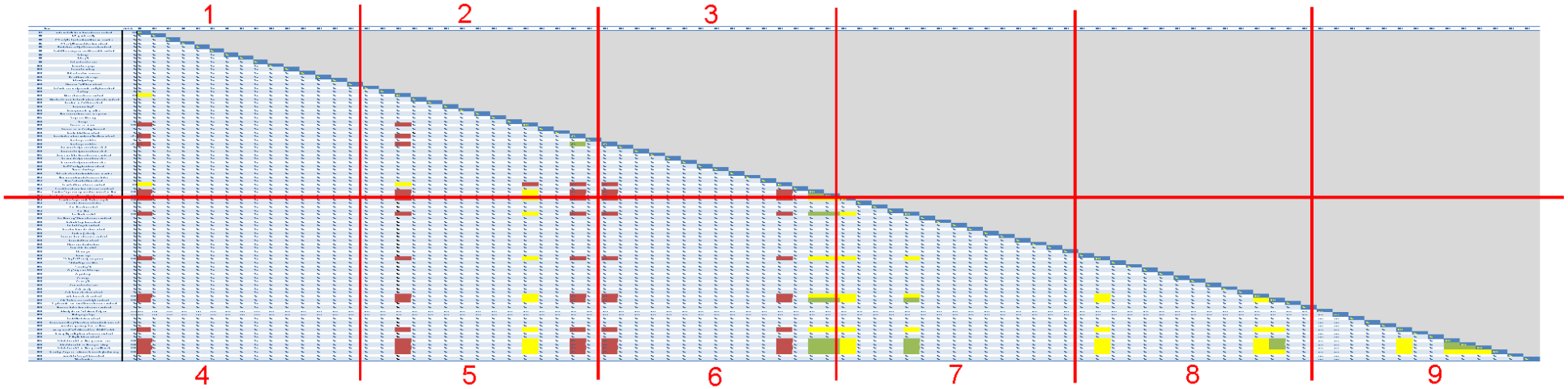
	Name	attribute	ID 61	ID 62	ID 63	ID 64	ID 65	ID 66	ID 67	ID 68	ID 69	ID 70	ID 71	ID 72	ID 73	ID 74	ID 75
ID 46	Projected changes in water-limited crop yield	IPCC															
ID 47	Projection of ocean acidification	IPCC															
ID 48	River floods (observation)	unclear															
ID 49	River flow	unclear															
ID 50	River flow (projected)	other															
ID 51	River flow drought (observations and projections)	disaster risk															
ID 52	Sea level change (observations)	not applicable															
ID 53	Sea level change (projections)	NA															
ID 54	Sea surface temperature (observations)	not applicable															
ID 55	Simple daily intensity	not applicable															
ID 56	Snow cover (observations and projections)	not applicable															
ID 57	Snow extent (observations)	not applicable															
ID 58	Standardized SnowPack Index	NA															
ID 59	Snow Water Equivalent	not applicable															
ID 60	Storm surges	not applicable															
ID 61	Summer days	not applicable	not applicable														
ID 62	The length of thermal growing season	IPCC		IPCC													
ID 63	Total wet-day precipitation	not applicable			not applicable												
ID 64	Tropical nights	not applicable				not applicable											
ID 65	Very heavy precipitation days	not applicable					not applicable										
ID 66	Very wet days	not applicable						not applicable									
ID 67	Warm days	NA							NA								
ID 68	Warm nights	NA								NA							
ID 69	Warm spell duration index	not applicable									not applicable						
ID 70	Water scarcity	IPCC										IPCC					
ID 71	Water temperature (observations)	not applicable											not applicable				
ID 72	water temperature (projections)	not applicable												not applicable			
ID 73	Water-limited crop productivity (projections)	IPCC													IPCC		
ID 74	Irrigation water requirement (observations and projections)	unclear	?	?	?	?	?	?	?	?	?	?	?	?	?	unclear	
ID 75	Ocean acidification (observations and projections)	not applicable															not applicable
ID 76	Intensity of urban heat island with city size	not applicable															
ID 77	Heating degree-days	IPCC															
ID 78	Rainfall Deciles (observations)	not applicable															
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	disaster risk															
ID 80	Annual average damage from river floods	disaster risk	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA		?	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	IPCC	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA		?	NA
ID 82	Growing Degree Days (observations and projections)	IPCC															
ID 83	Chilling Units (observations)	disaster risk															
ID 84	Potential impact of river flooding on major roads	IPCC	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA		?	NA
ID 85	Potential impact of river flooding on railways	IPCC	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA		?	NA
ID 86	Potential impact of river flooding on settlements	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 87	Percentage change in arrivals/departures due to global warming	IPCC	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA		?	NA
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	IPCC	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA		?	NA

Underlying conceptual frameworks (9)

	Name	attribute	ID 76	ID 77	ID 78	ID 79	ID 80	ID 81	ID 82	ID 83	ID 84	ID 85	ID 86	ID 87	ID 88	ID 89
ID 46	Projected changes in water-limited crop yield	IPCC														
ID 47	Projection of ocean acidification	IPCC														
ID 48	River floods (observation)	unclear														
ID 49	River flow	unclear														
ID 50	River flow (projected)	other														
ID 51	River flow drought (observations and projections)	disaster risk														
ID 52	Sea level change (observations)	not applicable														
ID 53	Sea level change (projections)	NA														
ID 54	Sea surface temperature (observations)	not applicable														
ID 55	Simple daily intensity	not applicable														
ID 56	Snow cover (observations and projections)	not applicable														
ID 57	Snow extent (observations)	not applicable														
ID 58	Standardized SnowPack Index	NA														
ID 59	Snow Water Equivalent	not applicable														
ID 60	Storm surges	not applicable														
ID 61	Summer days	not applicable														
ID 62	The length of thermal growing season	IPCC														
ID 63	Total wet-day precipitation	not applicable														
ID 64	Tropical nights	not applicable														
ID 65	Very heavy precipitation days	not applicable														
ID 66	Very wet days	not applicable														
ID 67	Warm days	NA														
ID 68	Warm nights	NA														
ID 69	Warm spell duration index	not applicable														
ID 70	Water scarcity	IPCC														
ID 71	Water temperature (observations)	not applicable														
ID 72	water temperature (projections)	not applicable														
ID 73	Water-limited crop productivity (projections)	IPCC														
ID 74	Irrigation water requirement (observations and projections)	unclear														
ID 75	Ocean acidification (observations and projections)	not applicable														
ID 76	Intensity of urban heat island with city size	not applicable	not applicable													
ID 77	Heating degree-days	IPCC		IPCC												
ID 78	Rainfall Deciles (observations)	not applicable			not applicable											
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	disaster risk				disaster risk										
ID 80	Annual average damage from river floods	disaster risk	NA		NA		disaster risk									
ID 81	Average annual heat-related deaths per 100,000 habitats	IPCC	NA		NA			IPCC								
ID 82	Growing Degree Days (observations and projections)	IPCC							IPCC							
ID 83	Chilling Units (observations)	disaster risk								disaster risk						
ID 84	Potential impact of river flooding on major roads	IPCC	NA		NA						IPCC					
ID 85	Potential impact of river flooding on railways	IPCC	NA		NA							IPCC				
ID 86	Potential impact of river flooding on settlements	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
ID 87	Percentage change in arrivals/departures due to global warming	IPCC	NA		NA								NA	IPCC		
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ID 89	Natural disasters	IPCC	NA		NA								NA		NA	IPCC

2. Underlying scenarios

The following overview shows the compatibility assessment in regard to underlying scenarios. The red numbers mark nine single sheets, which are presented in detail on the following pages.



Underlying scenarios (1)

	Name	atrribute	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13	ID 14	ID 15
ID 1	Arctic and Baltic Sea ice (observations / projections)	RCP	RCP														
ID 2	Bathing water quality	NA	NA	NA													
ID 3	Chlorophyll in transitional, coastal and marine waters	NA	NA	NA	NA												
ID 4	Chlorophyll-a concentration (observations)	NA	NA	NA	NA	NA											
ID 5	Climatic favourability of tree species (projections)	NA	NA	NA	NA	NA	NA										
ID 6	Coastal flood damage and adaptation costs (projections)	NA	NA	NA	NA	NA	NA	NA									
ID 7	Cold days	NA	NA	NA	NA	NA	NA	NA	NA								
ID 8	Cold nights	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 9	Cold spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 10	Consecutive dry days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 11	Consecutive wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
ID 12	Distribution of marine species	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
ID 13	Diurnal temperature range	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
ID 14	Extremely wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ID 15	Floods and health (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 16	Freshwater biodiversity and water quality (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 17	Frost days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 18	Glaciers (observations / projections)	RCP		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 19	Global and European Sea Level Rise (observations & projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 20	Greenland ice sheet (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 21	Grow season length	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 22	Growing season for agriculture	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 23	Hazardous substances in marine organisms	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 24	heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 25	Ice days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 26	Lake and river ice cover	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 27	Lake and river ice phenology (observed)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 28	Lake Ice Extent (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 29	Land elevation below projected sea-level (observations)	other	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 30	Max 1 day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 31	Max 5 day precipitation	other	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 32	Maximum of daily minimum temperature)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 33	Maximum of daily maximum temperature)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 34	Mean precipitation (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 35	Minimum of daily minimum temperature	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 36	Minimum of daily maximum temperature	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 37	Moth Phenology Index (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 38	Number of wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 39	Nutrients in transitional, coastal and marine waters	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 40	Observed development of ocean acidification	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 41	Ocean heat content (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 42	Permafrost (observations / projections)	RCP		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 43	Precipitation extremes (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 44	Projected change in average annual and seasonal river flow	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 45	Projected change in river floods with a return period of 100 years	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Underlying scenarios (2)

	Name	atrribute	ID 16	ID 17	ID 18	ID 19	ID 20	ID 21	ID 22	ID 23	ID 24	ID 25	ID 26	ID 27	ID 28	ID 29	ID 30
ID 1	Arctic and Baltic Sea ice (observations / projections)	RCP															
ID 2	Bathing water quality	NA															
ID 3	Chlorophyll in transitional, coastal and marine waters	NA															
ID 4	Chlorophyll-a concentration (observations)	NA															
ID 5	Climatic favourability of tree species (projections)	NA															
ID 6	Coastal flood damage and adaptation costs (projections)	NA															
ID 7	Cold days	NA															
ID 8	Cold nights	NA															
ID 9	Cold spell duration index	NA															
ID 10	Consecutive dry days	NA															
ID 11	Consecutive wet days	NA															
ID 12	Distribution of marine species	NA															
ID 13	Diurnal temperature range	NA															
ID 14	Extremely wet days	NA															
ID 15	Floods and health (observations)	NA															
ID 16	Freshwater biodiversity and water quality (observations)	NA	NA														
ID 17	Frost days	NA	NA	NA													
ID 18	Glaciers (observations / projections)	RCP	NA	NA	RCP												
ID 19	Global and European Sea Level Rise (observations & projections)	NA	NA	NA	NA	NA											
ID 20	Greenland ice sheet (observations)	NA	NA	NA	NA	NA	NA										
ID 21	Grow season length	NA	NA	NA	NA	NA	NA	NA									
ID 22	Growing season for agriculture	NA	NA	NA	NA	NA	NA	NA	NA								
ID 23	Hazardous substances in marine organisms	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 24	heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 25	Ice days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 26	Lake and river ice cover	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA	SRES				
ID 27	Lake and river ice phenology (observed)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
ID 28	Lake Ice Extent (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
ID 29	Land elevation below projected sea-level (observations)	other	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	
ID 30	Max 1 day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 31	Max 5 day precipitation	other	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA
ID 32	Maximum of daily minimum temperature)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 33	Maximum of daily maximum temperature)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 34	Mean precipitation (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 35	Minimum of daily minimum temperature	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 36	Minimum of daily maximum temperature	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 37	Moth Phenology Index (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 38	Number of wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 39	Nutrients in transitional, coastal and marine waters	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 40	Observed development of ocean acidification	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 41	Ocean heat content (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 42	Permafrost (observations / projections)	RCP	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA
ID 43	Precipitation extremes (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 44	Projected change in average annual and seasonal river flow	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA
ID 45	Projected change in river floods with a return period of 100 years	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA

Underlying scenarios (3)

	Name	atrribute	ID 31	ID 32	ID 33	ID 34	ID 35	ID 36	ID 37	ID 38	ID 39	ID 40	ID 41	ID 42	ID 43	ID 44	ID 45
ID 1	Arctic and Baltic Sea ice (observations / projections)	RCP															
ID 2	Bathing water quality	NA															
ID 3	Chlorophyll in transitional, coastal and marine waters	NA															
ID 4	Chlorophyll-a concentration (observations)	NA															
ID 5	Climatic favourability of tree species (projections)	NA															
ID 6	Coastal flood damage and adaptation costs (projections)	NA															
ID 7	Cold days	NA															
ID 8	Cold nights	NA															
ID 9	Cold spell duration index	NA															
ID 10	Consecutive dry days	NA															
ID 11	Consecutive wet days	NA															
ID 12	Distribution of marine species	NA															
ID 13	Diurnal temperature range	NA															
ID 14	Extremely wet days	NA															
ID 15	Floods and health (observations)	NA															
ID 16	Freshwater biodiversity and water quality (observations)	NA															
ID 17	Frost days	NA															
ID 18	Glaciers (observations / projections)	RCP															
ID 19	Global and European Sea Level Rise (observations & projections)	NA															
ID 20	Greenland ice sheet (observations)	NA															
ID 21	Grow season length	NA															
ID 22	Growing season for agriculture	NA															
ID 23	Hazardous substances in marine organisms	NA															
ID 24	heavy precipitation days	NA															
ID 25	Ice days	NA															
ID 26	Lake and river ice cover	SRES															
ID 27	Lake and river ice phenology (observed)	NA															
ID 28	Lake Ice Extent (observations)	NA															
ID 29	Land elevation below projected sea-level (observations)	other															
ID 30	Max 1 day precipitation	NA															
ID 31	Max 5 day precipitation	other	other														
ID 32	Maximum of daily minimum temperature)	NA	NA	NA													
ID 33	Maximum of daily maximum temperature)	NA	NA	NA	NA												
ID 34	Mean precipitation (observations and projections)	NA	NA	NA	NA	NA											
ID 35	Minimum of daily minimum temperature	NA	NA	NA	NA	NA	NA										
ID 36	Minimum of daily maximum temperature	NA	NA	NA	NA	NA	NA	NA									
ID 37	Moth Phenology Index (observations)	NA	NA	NA	NA	NA	NA	NA	NA								
ID 38	Number of wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 39	Nutrients in transitional, coastal and marine waters	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 40	Observed development of ocean acidification	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 41	Ocean heat content (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
ID 42	Permafrost (observations / projections)	RCP	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	RCP			
ID 43	Precipitation extremes (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
ID 44	Projected change in average annual and seasonal river flow	SRES	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	SRES	
ID 45	Projected change in river floods with a return period of 100 years	SRES	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		SRES

Underlying scenarios (4)

	Name	atrribute	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13	ID 14	ID 15
ID 46	Projected changes in water-limited crop yield	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 47	Projection of ocean acidification	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 48	River floods (observation)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 49	River flow	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 50	River flow (projected)	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 51	River flow drought (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 52	Sea level change (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 56	Snow cover (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 57	Snow extent (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 58	Standardized SnowPack Index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 59	Snow Water Equivalent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 71	Water temperature (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 72	water temperature (projections)	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 73	Water-limited crop productivity (projections)	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 74	Irrigation water requirement (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 75	Ocean acidification (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 76	Intensity of urban heat island with city size	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none
ID 77	Heating degree-days	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 85	Potential impact of river flooding on railways	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 86	Potential impact of river flooding on settlements	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 87	Percentage change in arrivals/departures due to global warming	SRES		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Underlying scenarios (5)

	Name	atrribute	ID 16	ID 17	ID 18	ID 19	ID 20	ID 21	ID 22	ID 23	ID 24	ID 25	ID 26	ID 27	ID 28	ID 29	ID 30
ID 46	Projected changes in water-limited crop yield	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA
ID 47	Projection of ocean acidification	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 48	River floods (observation)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 49	River flow	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 50	River flow (projected)	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA
ID 51	River flow drought (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 52	Sea level change (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 56	Snow cover (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 57	Snow extent (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 58	Standardized SnowPack Index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 59	Snow Water Equivalent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 71	Water temperature (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 72	water temperature (projections)	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA
ID 73	Water-limited crop productivity (projections)	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA
ID 74	Irrigation water requirement (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 75	Ocean acidification (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 76	Intensity of urban heat island with city size	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none
ID 77	Heating degree-days	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA
ID 85	Potential impact of river flooding on railways	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA
ID 86	Potential impact of river flooding on settlements	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA
ID 87	Percentage change in arrivals/departures due to global warming	SRES	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	other	NA
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Underlying scenarios (6)

	Name	atrribute	ID 31	ID 32	ID 33	ID 34	ID 35	ID 36	ID 37	ID 38	ID 39	ID 40	ID 41	ID 42	ID 43	ID 44	ID 45
ID 46	Projected changes in water-limited crop yield	SRES	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		
ID 47	Projection of ocean acidification	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 48	River floods (observation)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 49	River flow	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 50	River flow (projected)	SRES	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		
ID 51	River flow drought (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 52	Sea level change (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 56	Snow cover (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 57	Snow extent (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 58	Standardized SnowPack Index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 59	Snow Water Equivalent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	SRES	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 71	Water temperature (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 72	water temperature (projections)	SRES	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		
ID 73	Water-limited crop productivity (projections)	SRES	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		
ID 74	Irrigation water requirement (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 75	Ocean acidification (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 76	Intensity of urban heat island with city size	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none
ID 77	Heating degree-days	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	SRES	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	SRES	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		
ID 85	Potential impact of river flooding on railways	SRES	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		
ID 86	Potential impact of river flooding on settlements	SRES	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		
ID 87	Percentage change in arrivals/departures due to global warming	SRES	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Underlying scenarios (7)

	Name	atrribute	ID 46	ID 47	ID 48	ID 49	ID 50	ID 51	ID 52	ID 53	ID 54	ID 55	ID 56	ID 57	ID 58	ID 59	ID 60
ID 46	Projected changes in water-limited crop yield	SRES	SRES														
ID 47	Projection of ocean acidification	NA	NA	NA													
ID 48	River floods (observation)	NA	NA	NA	NA												
ID 49	River flow	NA	NA	NA	NA	NA											
ID 50	River flow (projected)	SRES		NA	NA	NA	SRES										
ID 51	River flow drought (observations and projections)	NA	NA	NA	NA	NA	NA	NA									
ID 52	Sea level change (observations)	NA	NA	NA	NA	NA	NA	NA	NA								
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 54	Sea surface temperature (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 56	Snow cover (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
ID 57	Snow extent (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
ID 58	Standardized SnowPack Index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
ID 59	Snow Water Equivalent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	SRES		NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 71	Water temperature (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 72	water temperature (projections)	SRES		NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 73	Water-limited crop productivity (projections)	SRES		NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 74	Irrigation water requirement (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 75	Ocean acidification (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 76	Intensity of urban heat island with city size	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none
ID 77	Heating degree-days	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	SRES		NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	SRES		NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 85	Potential impact of river flooding on railways	SRES		NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 86	Potential impact of river flooding on settlements	SRES		NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 87	Percentage change in arrivals/departures due to global warming	SRES		NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Underlying scenarios (8)

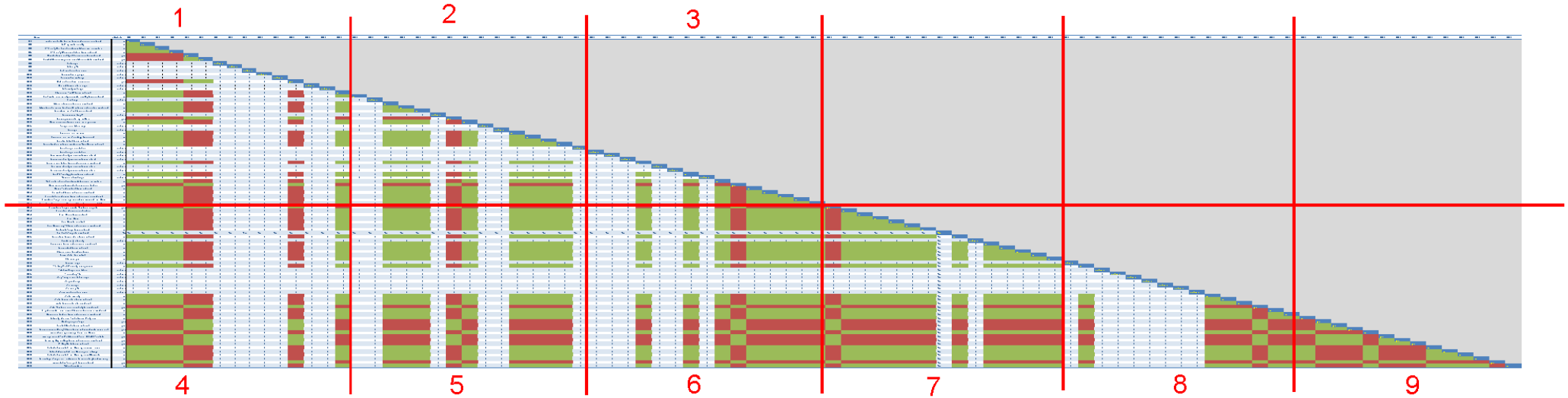
	Name	atrribute	ID 61	ID 62	ID 63	ID 64	ID 65	ID 66	ID 67	ID 68	ID 69	ID 70	ID 71	ID 72	ID 73	ID 74	ID 75
ID 46	Projected changes in water-limited crop yield	SRES															
ID 47	Projection of ocean acidification	NA															
ID 48	River floods (observation)	NA															
ID 49	River flow	NA															
ID 50	River flow (projected)	SRES															
ID 51	River flow drought (observations and projections)	NA															
ID 52	Sea level change (observations)	NA															
ID 53	Sea level change (projections)	NA															
ID 54	Sea surface temperature (observations)	NA															
ID 55	Simple daily intensity	NA															
ID 56	Snow cover (observations and projections)	NA															
ID 57	Snow extent (observations)	NA															
ID 58	Standardized SnowPack Index	NA															
ID 59	Snow Water Equivalent	NA															
ID 60	Storm surges	NA															
ID 61	Summer days	NA	NA														
ID 62	The length of thermal growing season	SRES	NA	SRES													
ID 63	Total wet-day precipitation	NA	NA	NA	NA												
ID 64	Tropical nights	NA	NA	NA	NA	NA											
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA										
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA									
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA								
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 70	Water scarcity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 71	Water temperature (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
ID 72	water temperature (projections)	SRES	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	SRES			
ID 73	Water-limited crop productivity (projections)	SRES	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		SRES		
ID 74	Irrigation water requirement (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ID 75	Ocean acidification (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 76	Intensity of urban heat island with city size	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none
ID 77	Heating degree-days	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	SRES	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA			NA	NA
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	SRES	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA			NA	NA
ID 85	Potential impact of river flooding on railways	SRES	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA			NA	NA
ID 86	Potential impact of river flooding on settlements	SRES	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA			NA	NA
ID 87	Percentage change in arrivals/departures due to global warming	SRES	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA			NA	NA
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Underlying scenarios (9)

	Name	atrribute	ID 76	ID 77	ID 78	ID 79	ID 80	ID 81	ID 82	ID 83	ID 84	ID 85	ID 86	ID 87	ID 88	ID 89
ID 46	Projected changes in water-limited crop yield	SRES														
ID 47	Projection of ocean acidification	NA														
ID 48	River floods (observation)	NA														
ID 49	River flow	NA														
ID 50	River flow (projected)	SRES														
ID 51	River flow drought (observations and projections)	NA														
ID 52	Sea level change (observations)	NA														
ID 53	Sea level change (projections)	NA														
ID 54	Sea surface temperature (observations)	NA														
ID 55	Simple daily intensity	NA														
ID 56	Snow cover (observations and projections)	NA														
ID 57	Snow extent (observations)	NA														
ID 58	Standardized SnowPack Index	NA														
ID 59	Snow Water Equivalent	NA														
ID 60	Storm surges	NA														
ID 61	Summer days	NA														
ID 62	The length of thermal growing season	SRES														
ID 63	Total wet-day precipitation	NA														
ID 64	Tropical nights	NA														
ID 65	Very heavy precipitation days	NA														
ID 66	Very wet days	NA														
ID 67	Warm days	NA														
ID 68	Warm nights	NA														
ID 69	Warm spell duration index	NA														
ID 70	Water scarcity	NA														
ID 71	Water temperature (observations)	NA														
ID 72	water temperature (projections)	SRES														
ID 73	Water-limited crop productivity (projections)	SRES														
ID 74	Irrigation water requirement (observations and projections)	NA														
ID 75	Ocean acidification (observations and projections)	NA														
ID 76	Intensity of urban heat island with city size	none	none													
ID 77	Heating degree-days	none	none	none												
ID 78	Rainfall Deciles (observations)	NA	none	none	NA											
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	none	none	NA	NA										
ID 80	Annual average damage from river floods	NA	none	none	NA	NA	NA									
ID 81	Average annual heat-related deaths per 100,000 habitats	SRES	none	none	NA	NA	NA	SRES								
ID 82	Growing Degree Days (observations and projections)	NA	none	none	NA	NA	NA	NA	NA							
ID 83	Chilling Units (observations)	NA	none	none	NA	NA	NA	NA	NA	NA						
ID 84	Potential impact of river flooding on major roads	SRES	none	none	NA	NA	NA		NA	NA	SRES					
ID 85	Potential impact of river flooding on railways	SRES	none	none	NA	NA	NA		NA	NA		SRES				
ID 86	Potential impact of river flooding on settlements	SRES	none	none	NA	NA	NA		NA	NA			SRES			
ID 87	Percentage change in arrivals/departures due to global warming	SRES	none	none	NA	NA	NA		NA	NA				SRES		
ID 88	Annual olive-crop yield (observations)	NA	none	none	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ID 89	Natural disasters	NA	none	none	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

3. Treatment of coping/adaptive capacity

The following overview shows the compatibility assessment in regard to inclusion of adaptive or coping capacity. The red numbers again mark nine single sheets, which are presented in detail on the following pages.



Treatment of coping/adaptive capacity (1)

	Name	attribute	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13	ID 14	ID 15
ID 1	Arctic and Baltic Sea ice (observations / projections)	no	no														
ID 2	Bathing water quality	no		no													
ID 3	Chlorophyll in transitional, coastal and marine waters	no			no												
ID 4	Chlorophyll-a concentration (observations)	no				no											
ID 5	Climatic favourability of tree species (projections)	yes					yes										
ID 6	Coastal flood damage and adaptation costs (projections)	yes						yes									
ID 7	Cold days	not sure	?	?	?	?	?	?	not sure								
ID 8	Cold nights	not sure	?	?	?	?	?	?	?	not sure							
ID 9	Cold spell duration index	not sure	?	?	?	?	?	?	?	?	not sure						
ID 10	Consecutive dry days	not sure	?	?	?	?	?	?	?	?	?	not sure					
ID 11	Consecutive wet days	not sure	?	?	?	?	?	?	?	?	?	?	not sure				
ID 12	Distribution of marine species	yes							?	?	?	?	?	yes			
ID 13	Diurnal temperature range	not sure	?	?	?	?	?	?	?	?	?	?	?	?	not sure		
ID 14	Extremely wet days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	not sure	
ID 15	Floods and health (observations)	no							?	?	?	?	?		?	?	no
ID 16	Freshwater biodiversity and water quality (observations)	no							?	?	?	?	?		?	?	
ID 17	Frost days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 18	Glaciers (observations / projections)	no							?	?	?	?	?		?	?	
ID 19	Global and European Sea Level Rise (observations & projections)	no							?	?	?	?	?		?	?	
ID 20	Greenland ice sheet (observations)	no							?	?	?	?	?		?	?	
ID 21	Grow season length	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 22	Growing season for agriculture	yes							?	?	?	?	?		?	?	
ID 23	Hazardous substances in marine organisms	no							?	?	?	?	?		?	?	
ID 24	heavy precipitation days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 25	Ice days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 26	Lake and river ice cover	no							?	?	?	?	?		?	?	
ID 27	Lake and river ice phenology (observed)	no							?	?	?	?	?		?	?	
ID 28	Lake Ice Extent (observations)	no							?	?	?	?	?		?	?	
ID 29	Land elevation below projected sea-level (observations)	no							?	?	?	?	?		?	?	
ID 30	Max 1 day precipitation	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 31	Max 5 day precipitation	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 32	Maximum of daily minimum temperature)	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 33	Maximum of daily maximum temperature)	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 34	Mean precipitation (observations and projections)	no							?	?	?	?	?		?	?	
ID 35	Minimum of daily minimum temperature	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 36	Minimum of daily maximum temperature	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 37	Moth Phenology Index (observations)	no							?	?	?	?	?		?	?	
ID 38	Number of wet days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 39	Nutrients in transitional, coastal and marine waters	no							?	?	?	?	?		?	?	
ID 40	Observed development of ocean acidification	yes							?	?	?	?	?		?	?	
ID 41	Ocean heat content (observations)	no							?	?	?	?	?		?	?	
ID 42	Permafrost (observations / projections)	no							?	?	?	?	?		?	?	
ID 43	Precipitation extremes (observations and projections)	no							?	?	?	?	?		?	?	
ID 44	Projected change in average annual and seasonal river flow	no							?	?	?	?	?		?	?	
ID 45	Projected change in river floods with a return period of 100 years	no							?	?	?	?	?		?	?	

Treatment of coping/adaptive capacity (2)

	Name	attribute	ID 16	ID 17	ID 18	ID 19	ID 20	ID 21	ID 22	ID 23	ID 24	ID 25	ID 26	ID 27	ID 28	ID 29	ID 30
ID 1	Arctic and Baltic Sea ice (observations / projections)	no															
ID 2	Bathing water quality	no															
ID 3	Chlorophyll in transitional, coastal and marine waters	no															
ID 4	Chlorophyll-a concentration (observations)	no															
ID 5	Climatic favourability of tree species (projections)	yes															
ID 6	Coastal flood damage and adaptation costs (projections)	yes															
ID 7	Cold days	not sure															
ID 8	Cold nights	not sure															
ID 9	Cold spell duration index	not sure															
ID 10	Consecutive dry days	not sure															
ID 11	Consecutive wet days	not sure															
ID 12	Distribution of marine species	yes															
ID 13	Diurnal temperature range	not sure															
ID 14	Extremely wet days	not sure															
ID 15	Floods and health (observations)	no															
ID 16	Freshwater biodiversity and water quality (observations)	no	no														
ID 17	Frost days	not sure	?	not sure													
ID 18	Glaciers (observations / projections)	no		?	no												
ID 19	Global and European Sea Level Rise (observations & projections)	no		?		no											
ID 20	Greenland ice sheet (observations)	no		?			no										
ID 21	Grow season length	not sure	?	?	?	?	?	not sure									
ID 22	Growing season for agriculture	yes		?				?	yes								
ID 23	Hazardous substances in marine organisms	no		?				?		no							
ID 24	heavy precipitation days	not sure	?	?	?	?	?	?	?	?	not sure						
ID 25	Ice days	not sure	?	?	?	?	?	?	?	?	?	not sure					
ID 26	Lake and river ice cover	no		?				?			?	?	no				
ID 27	Lake and river ice phenology (observed)	no		?				?			?	?		no			
ID 28	Lake Ice Extent (observations)	no		?				?			?	?			no		
ID 29	Land elevation below projected sea-level (observations)	no		?				?			?	?				no	
ID 30	Max 1 day precipitation	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	not sure
ID 31	Max 5 day precipitation	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 32	Maximum of daily minimum temperature)	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 33	Maximum of daily maximum temperature)	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 34	Mean precipitation (observations and projections)	no		?				?			?	?					?
ID 35	Minimum of daily minimum temperature	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 36	Minimum of daily maximum temperature	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 37	Moth Phenology Index (observations)	no		?				?			?	?					?
ID 38	Number of wet days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 39	Nutrients in transitional, coastal and marine waters	no		?				?			?	?					?
ID 40	Observed development of ocean acidification	yes		?				?			?	?					?
ID 41	Ocean heat content (observations)	no		?				?			?	?					?
ID 42	Permafrost (observations / projections)	no		?				?			?	?					?
ID 43	Precipitation extremes (observations and projections)	no		?				?			?	?					?
ID 44	Projected change in average annual and seasonal river flow	no		?				?			?	?					?
ID 45	Projected change in river floods with a return period of 100 years	no		?				?			?	?					?

Treatment of coping/adaptive capacity (3)

	Name	attribute	ID 31	ID 32	ID 33	ID 34	ID 35	ID 36	ID 37	ID 38	ID 39	ID 40	ID 41	ID 42	ID 43	ID 44	ID 45
ID 1	Arctic and Baltic Sea ice (observations / projections)	no															
ID 2	Bathing water quality	no															
ID 3	Chlorophyll in transitional, coastal and marine waters	no															
ID 4	Chlorophyll-a concentration (observations)	no															
ID 5	Climatic favourability of tree species (projections)	yes															
ID 6	Coastal flood damage and adaptation costs (projections)	yes															
ID 7	Cold days	not sure															
ID 8	Cold nights	not sure															
ID 9	Cold spell duration index	not sure															
ID 10	Consecutive dry days	not sure															
ID 11	Consecutive wet days	not sure															
ID 12	Distribution of marine species	yes															
ID 13	Diurnal temperature range	not sure															
ID 14	Extremely wet days	not sure															
ID 15	Floods and health (observations)	no															
ID 16	Freshwater biodiversity and water quality (observations)	no															
ID 17	Frost days	not sure															
ID 18	Glaciers (observations / projections)	no															
ID 19	Global and European Sea Level Rise (observations & projections)	no															
ID 20	Greenland ice sheet (observations)	no															
ID 21	Grow season length	not sure															
ID 22	Growing season for agriculture	yes															
ID 23	Hazardous substances in marine organisms	no															
ID 24	heavy precipitation days	not sure															
ID 25	Ice days	not sure															
ID 26	Lake and river ice cover	no															
ID 27	Lake and river ice phenology (observed)	no															
ID 28	Lake Ice Extent (observations)	no															
ID 29	Land elevation below projected sea-level (observations)	no															
ID 30	Max 1 day precipitation	not sure															
ID 31	Max 5 day precipitation	not sure	not sure														
ID 32	Maximum of daily minimum temperature)	not sure	?	not sure													
ID 33	Maximum of daily maximum temperature)	not sure	?	?	not sure												
ID 34	Mean precipitation (observations and projections)	no	?	?	?	no											
ID 35	Minimum of daily minimum temperature	not sure	?	?	?	?	not sure										
ID 36	Minimum of daily maximum temperature	not sure	?	?	?	?	?	not sure									
ID 37	Moth Phenology Index (observations)	no	?	?	?		?	?	no								
ID 38	Number of wet days	not sure	?	?	?	?	?	?	?	not sure							
ID 39	Nutrients in transitional, coastal and marine waters	no	?	?	?		?	?		?	no						
ID 40	Observed development of ocean acidification	yes	?	?	?		?	?		?		yes					
ID 41	Ocean heat content (observations)	no	?	?	?		?	?		?			no				
ID 42	Permafrost (observations / projections)	no	?	?	?		?	?		?				no			
ID 43	Precipitation extremes (observations and projections)	no	?	?	?		?	?		?					no		
ID 44	Projected change in average annual and seasonal river flow	no	?	?	?		?	?		?						no	
ID 45	Projected change in river floods with a return period of 100 years	no	?	?	?		?	?		?							no

Treatment of coping/adaptive capacity (4)

	Name	attribute	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13	ID 14	ID 15
ID 46	Projected changes in water-limited crop yield	yes							?	?	?	?	?		?	?	
ID 47	Projection of ocean acidification	no							?	?	?	?	?		?	?	
ID 48	River floods (observation)	no							?	?	?	?	?		?	?	
ID 49	River flow	no							?	?	?	?	?		?	?	
ID 50	River flow (projected)	no							?	?	?	?	?		?	?	
ID 51	River flow drought (observations and projections)	no							?	?	?	?	?		?	?	
ID 52	Sea level change (observations)	no							?	?	?	?	?		?	?	
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	no							?	?	?	?	?		?	?	
ID 55	Simple daily intensity	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 56	Snow cover (observations and projections)	no							?	?	?	?	?		?	?	
ID 57	Snow extent (observations)	no							?	?	?	?	?		?	?	
ID 58	Standardized SnowPack Index	no							?	?	?	?	?		?	?	
ID 59	Snow Water Equivalent	no							?	?	?	?	?		?	?	
ID 60	Storm surges	no							?	?	?	?	?		?	?	
ID 61	Summer days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 62	The length of thermal growing season	no							?	?	?	?	?		?	?	
ID 63	Total wet-day precipitation	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 64	Tropical nights	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 65	Very heavy precipitation days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 66	Very wet days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 67	Warm days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 68	Warm nights	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 69	Warm spell duration index	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 70	Water scarcity	no							?	?	?	?	?		?	?	
ID 71	Water temperature (observations)	no							?	?	?	?	?		?	?	
ID 72	water temperature (projections)	no							?	?	?	?	?		?	?	
ID 73	Water-limited crop productivity (projections)	yes							?	?	?	?	?		?	?	
ID 74	Irrigation water requirement (observations and projections)	no							?	?	?	?	?		?	?	
ID 75	Ocean acidification (observations and projections)	no							?	?	?	?	?		?	?	
ID 76	Intensity of urban heat island with city size	no							?	?	?	?	?		?	?	
ID 77	Heating degree-days	yes							?	?	?	?	?		?	?	
ID 78	Rainfall Deciles (observations)	yes							?	?	?	?	?		?	?	
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	yes							?	?	?	?	?		?	?	
ID 80	Annual average damage from river floods	no							?	?	?	?	?		?	?	
ID 81	Average annual heat-related deaths per 100,000 habitats	yes							?	?	?	?	?		?	?	
ID 82	Growing Degree Days (observations and projections)	yes							?	?	?	?	?		?	?	
ID 83	Chilling Units (observations)	yes							?	?	?	?	?		?	?	
ID 84	Potential impact of river flooding on major roads	no							?	?	?	?	?		?	?	
ID 85	Potential impact of river flooding on railways	no							?	?	?	?	?		?	?	
ID 86	Potential impact of river flooding on settlements	no							?	?	?	?	?		?	?	
ID 87	Percentage change in arrivals/departures due to global warming	no							?	?	?	?	?		?	?	
ID 88	Annual olive-crop yield (observations)	yes							?	?	?	?	?		?	?	
ID 89	Natural disasters	no							?	?	?	?	?		?	?	

Treatment of coping/adaptive capacity (5)

	Name	attribute	ID 16	ID 17	ID 18	ID 19	ID 20	ID 21	ID 22	ID 23	ID 24	ID 25	ID 26	ID 27	ID 28	ID 29	ID 30
ID 46	Projected changes in water-limited crop yield	yes		?				?			?	?					?
ID 47	Projection of ocean acidification	no		?				?			?	?					?
ID 48	River floods (observation)	no		?				?			?	?					?
ID 49	River flow	no		?				?			?	?					?
ID 50	River flow (projected)	no		?				?			?	?					?
ID 51	River flow drought (observations and projections)	no		?				?			?	?					?
ID 52	Sea level change (observations)	no		?				?			?	?					?
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	no		?				?			?	?					?
ID 55	Simple daily intensity	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 56	Snow cover (observations and projections)	no		?				?			?	?					?
ID 57	Snow extent (observations)	no		?				?			?	?					?
ID 58	Standardized SnowPack Index	no		?				?			?	?					?
ID 59	Snow Water Equivalent	no		?				?			?	?					?
ID 60	Storm surges	no		?				?			?	?					?
ID 61	Summer days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 62	The length of thermal growing season	no		?				?			?	?					?
ID 63	Total wet-day precipitation	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 64	Tropical nights	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 65	Very heavy precipitation days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 66	Very wet days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 67	Warm days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 68	Warm nights	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 69	Warm spell duration index	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 70	Water scarcity	no		?				?			?	?					?
ID 71	Water temperature (observations)	no		?				?			?	?					?
ID 72	water temperature (projections)	no		?				?			?	?					?
ID 73	Water-limited crop productivity (projections)	yes		?				?			?	?					?
ID 74	Irrigation water requirement (observations and projections)	no		?				?			?	?					?
ID 75	Ocean acidification (observations and projections)	no		?				?			?	?					?
ID 76	Intensity of urban heat island with city size	no		?				?			?	?					?
ID 77	Heating degree-days	yes		?				?			?	?					?
ID 78	Rainfall Deciles (observations)	yes		?				?			?	?					?
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	yes		?				?			?	?					?
ID 80	Annual average damage from river floods	no		?				?			?	?					?
ID 81	Average annual heat-related deaths per 100,000 habitats	yes		?				?			?	?					?
ID 82	Growing Degree Days (observations and projections)	yes		?				?			?	?					?
ID 83	Chilling Units (observations)	yes		?				?			?	?					?
ID 84	Potential impact of river flooding on major roads	no		?				?			?	?					?
ID 85	Potential impact of river flooding on railways	no		?				?			?	?					?
ID 86	Potential impact of river flooding on settlements	no		?				?			?	?					?
ID 87	Percentage change in arrivals/departures due to global warming	no		?				?			?	?					?
ID 88	Annual olive-crop yield (observations)	yes		?				?			?	?					?
ID 89	Natural disasters	no		?				?			?	?					?

Treatment of coping/adaptive capacity (6)

	Name	attribute	ID 31	ID 32	ID 33	ID 34	ID 35	ID 36	ID 37	ID 38	ID 39	ID 40	ID 41	ID 42	ID 43	ID 44	ID 45
ID 46	Projected changes in water-limited crop yield	yes	?	?	?		?	?		?							
ID 47	Projection of ocean acidification	no	?	?	?		?	?		?							
ID 48	River floods (observation)	no	?	?	?		?	?		?							
ID 49	River flow	no	?	?	?		?	?		?							
ID 50	River flow (projected)	no	?	?	?		?	?		?							
ID 51	River flow drought (observations and projections)	no	?	?	?		?	?		?							
ID 52	Sea level change (observations)	no	?	?	?		?	?		?							
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	no	?	?	?		?	?		?							
ID 55	Simple daily intensity	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 56	Snow cover (observations and projections)	no	?	?	?		?	?		?							
ID 57	Snow extent (observations)	no	?	?	?		?	?		?							
ID 58	Standardized SnowPack Index	no	?	?	?		?	?		?							
ID 59	Snow Water Equivalent	no	?	?	?		?	?		?							
ID 60	Storm surges	no	?	?	?		?	?		?							
ID 61	Summer days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 62	The length of thermal growing season	no	?	?	?		?	?		?							
ID 63	Total wet-day precipitation	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 64	Tropical nights	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 65	Very heavy precipitation days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 66	Very wet days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 67	Warm days	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 68	Warm nights	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 69	Warm spell duration index	not sure	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
ID 70	Water scarcity	no	?	?	?		?	?		?							
ID 71	Water temperature (observations)	no	?	?	?		?	?		?							
ID 72	water temperature (projections)	no	?	?	?		?	?		?							
ID 73	Water-limited crop productivity (projections)	yes	?	?	?		?	?		?							
ID 74	Irrigation water requirement (observations and projections)	no	?	?	?		?	?		?							
ID 75	Ocean acidification (observations and projections)	no	?	?	?		?	?		?							
ID 76	Intensity of urban heat island with city size	no	?	?	?		?	?		?							
ID 77	Heating degree-days	yes	?	?	?		?	?		?							
ID 78	Rainfall Deciles (observations)	yes	?	?	?		?	?		?							
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	yes	?	?	?		?	?		?							
ID 80	Annual average damage from river floods	no	?	?	?		?	?		?							
ID 81	Average annual heat-related deaths per 100,000 habitats	yes	?	?	?		?	?		?							
ID 82	Growing Degree Days (observations and projections)	yes	?	?	?		?	?		?							
ID 83	Chilling Units (observations)	yes	?	?	?		?	?		?							
ID 84	Potential impact of river flooding on major roads	no	?	?	?		?	?		?							
ID 85	Potential impact of river flooding on railways	no	?	?	?		?	?		?							
ID 86	Potential impact of river flooding on settlements	no	?	?	?		?	?		?							
ID 87	Percentage change in arrivals/departures due to global warming	no	?	?	?		?	?		?							
ID 88	Annual olive-crop yield (observations)	yes	?	?	?		?	?		?							
ID 89	Natural disasters	no	?	?	?		?	?		?							

Treatment of coping/adaptive capacity (7)

	Name	attribute	ID 46	ID 47	ID 48	ID 49	ID 50	ID 51	ID 52	ID 53	ID 54	ID 55	ID 56	ID 57	ID 58	ID 59	ID 60
ID 46	Projected changes in water-limited crop yield	yes	yes														
ID 47	Projection of ocean acidification	no		no													
ID 48	River floods (observation)	no			no												
ID 49	River flow	no				no											
ID 50	River flow (projected)	no					no										
ID 51	River flow drought (observations and projections)	no						no									
ID 52	Sea level change (observations)	no							no								
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 54	Sea surface temperature (observations)	no								NA	no						
ID 55	Simple daily intensity	not sure	?	?	?	?	?	?	?	NA	?	not sure					
ID 56	Snow cover (observations and projections)	no								NA		?	no				
ID 57	Snow extent (observations)	no								NA		?		no			
ID 58	Standardized SnowPack Index	no								NA		?			no		
ID 59	Snow Water Equivalent	no								NA		?				no	
ID 60	Storm surges	no								NA		?					no
ID 61	Summer days	not sure	?	?	?	?	?	?	?	NA	?	?	?	?	?	?	?
ID 62	The length of thermal growing season	no								NA		?					
ID 63	Total wet-day precipitation	not sure	?	?	?	?	?	?	?	NA	?	?	?	?	?	?	?
ID 64	Tropical nights	not sure	?	?	?	?	?	?	?	NA	?	?	?	?	?	?	?
ID 65	Very heavy precipitation days	not sure	?	?	?	?	?	?	?	NA	?	?	?	?	?	?	?
ID 66	Very wet days	not sure	?	?	?	?	?	?	?	NA	?	?	?	?	?	?	?
ID 67	Warm days	not sure	?	?	?	?	?	?	?	NA	?	?	?	?	?	?	?
ID 68	Warm nights	not sure	?	?	?	?	?	?	?	NA	?	?	?	?	?	?	?
ID 69	Warm spell duration index	not sure	?	?	?	?	?	?	?	NA	?	?	?	?	?	?	?
ID 70	Water scarcity	no								NA		?					
ID 71	Water temperature (observations)	no								NA		?					
ID 72	water temperature (projections)	no								NA		?					
ID 73	Water-limited crop productivity (projections)	yes								NA		?					
ID 74	Irrigation water requirement (observations and projections)	no								NA		?					
ID 75	Ocean acidification (observations and projections)	no								NA		?					
ID 76	Intensity of urban heat island with city size	no								NA		?					
ID 77	Heating degree-days	yes								NA		?					
ID 78	Rainfall Deciles (observations)	yes								NA		?					
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	yes								NA		?					
ID 80	Annual average damage from river floods	no								NA		?					
ID 81	Average annual heat-related deaths per 100,000 habitats	yes								NA		?					
ID 82	Growing Degree Days (observations and projections)	yes								NA		?					
ID 83	Chilling Units (observations)	yes								NA		?					
ID 84	Potential impact of river flooding on major roads	no								NA		?					
ID 85	Potential impact of river flooding on railways	no								NA		?					
ID 86	Potential impact of river flooding on settlements	no								NA		?					
ID 87	Percentage change in arrivals/departures due to global warming	no								NA		?					
ID 88	Annual olive-crop yield (observations)	yes								NA		?					
ID 89	Natural disasters	no								NA		?					

Treatment of coping/adaptive capacity (8)

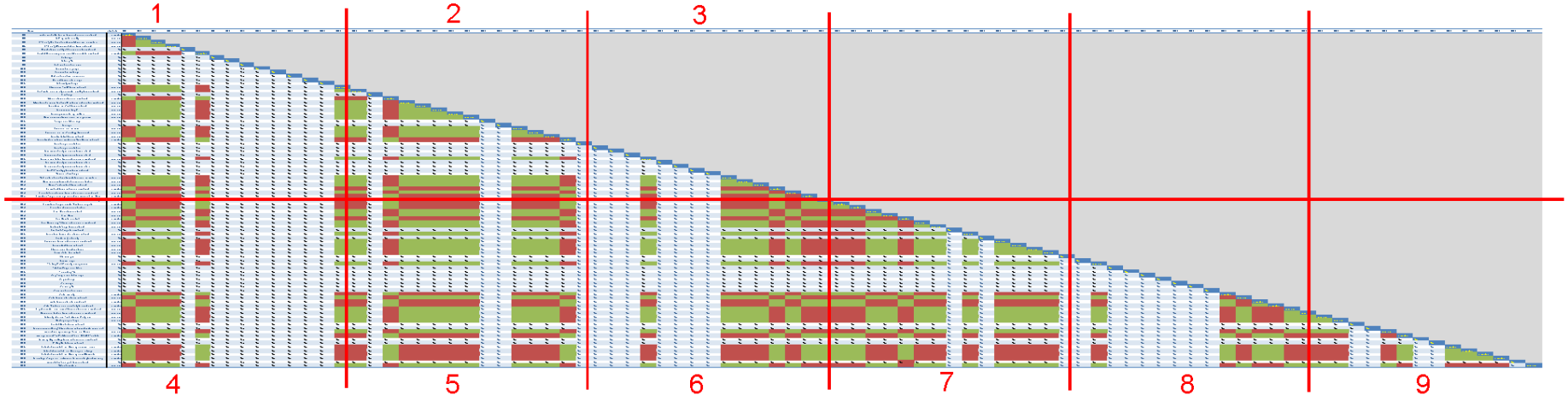
	Name	attribute	ID 61	ID 62	ID 63	ID 64	ID 65	ID 66	ID 67	ID 68	ID 69	ID 70	ID 71	ID 72	ID 73	ID 74	ID 75
ID 46	Projected changes in water-limited crop yield	yes															
ID 47	Projection of ocean acidification	no															
ID 48	River floods (observation)	no															
ID 49	River flow	no															
ID 50	River flow (projected)	no															
ID 51	River flow drought (observations and projections)	no															
ID 52	Sea level change (observations)	no															
ID 53	Sea level change (projections)	NA															
ID 54	Sea surface temperature (observations)	no															
ID 55	Simple daily intensity	not sure															
ID 56	Snow cover (observations and projections)	no															
ID 57	Snow extent (observations)	no															
ID 58	Standardized SnowPack Index	no															
ID 59	Snow Water Equivalent	no															
ID 60	Storm surges	no															
ID 61	Summer days	not sure	not sure														
ID 62	The length of thermal growing season	no	?	no													
ID 63	Total wet-day precipitation	not sure	?	?	not sure												
ID 64	Tropical nights	not sure	?	?	?	not sure											
ID 65	Very heavy precipitation days	not sure	?	?	?	?	not sure										
ID 66	Very wet days	not sure	?	?	?	?	?	not sure									
ID 67	Warm days	not sure	?	?	?	?	?	?	not sure								
ID 68	Warm nights	not sure	?	?	?	?	?	?	?	not sure							
ID 69	Warm spell duration index	not sure	?	?	?	?	?	?	?	?	not sure						
ID 70	Water scarcity	no	?		?	?	?	?	?	?	?	no					
ID 71	Water temperature (observations)	no	?		?	?	?	?	?	?	?		no				
ID 72	water temperature (projections)	no	?		?	?	?	?	?	?	?			no			
ID 73	Water-limited crop productivity (projections)	yes	?		?	?	?	?	?	?	?				yes		
ID 74	Irrigation water requirement (observations and projections)	no	?		?	?	?	?	?	?	?					no	
ID 75	Ocean acidification (observations and projections)	no	?		?	?	?	?	?	?	?						no
ID 76	Intensity of urban heat island with city size	no	?		?	?	?	?	?	?	?						
ID 77	Heating degree-days	yes	?		?	?	?	?	?	?	?						
ID 78	Rainfall Deciles (observations)	yes	?		?	?	?	?	?	?	?						
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	yes	?		?	?	?	?	?	?	?						
ID 80	Annual average damage from river floods	no	?		?	?	?	?	?	?	?						
ID 81	Average annual heat-related deaths per 100,000 habitats	yes	?		?	?	?	?	?	?	?						
ID 82	Growing Degree Days (observations and projections)	yes	?		?	?	?	?	?	?	?						
ID 83	Chilling Units (observations)	yes	?		?	?	?	?	?	?	?						
ID 84	Potential impact of river flooding on major roads	no	?		?	?	?	?	?	?	?						
ID 85	Potential impact of river flooding on railways	no	?		?	?	?	?	?	?	?						
ID 86	Potential impact of river flooding on settlements	no	?		?	?	?	?	?	?	?						
ID 87	Percentage change in arrivals/departures due to global warming	no	?		?	?	?	?	?	?	?						
ID 88	Annual olive-crop yield (observations)	yes	?		?	?	?	?	?	?	?						
ID 89	Natural disasters	no	?		?	?	?	?	?	?	?						

Treatment of coping/adaptive capacity (9)

	Name	attribute	ID 76	ID 77	ID 78	ID 79	ID 80	ID 81	ID 82	ID 83	ID 84	ID 85	ID 86	ID 87	ID 88	ID 89
ID 46	Projected changes in water-limited crop yield	yes														
ID 47	Projection of ocean acidification	no														
ID 48	River floods (observation)	no														
ID 49	River flow	no														
ID 50	River flow (projected)	no														
ID 51	River flow drought (observations and projections)	no														
ID 52	Sea level change (observations)	no														
ID 53	Sea level change (projections)	NA														
ID 54	Sea surface temperature (observations)	no														
ID 55	Simple daily intensity	not sure														
ID 56	Snow cover (observations and projections)	no														
ID 57	Snow extent (observations)	no														
ID 58	Standardized SnowPack Index	no														
ID 59	Snow Water Equivalent	no														
ID 60	Storm surges	no														
ID 61	Summer days	not sure														
ID 62	The length of thermal growing season	no														
ID 63	Total wet-day precipitation	not sure														
ID 64	Tropical nights	not sure														
ID 65	Very heavy precipitation days	not sure														
ID 66	Very wet days	not sure														
ID 67	Warm days	not sure														
ID 68	Warm nights	not sure														
ID 69	Warm spell duration index	not sure														
ID 70	Water scarcity	no														
ID 71	Water temperature (observations)	no														
ID 72	water temperature (projections)	no														
ID 73	Water-limited crop productivity (projections)	yes														
ID 74	Irrigation water requirement (observations and projections)	no														
ID 75	Ocean acidification (observations and projections)	no														
ID 76	Intensity of urban heat island with city size	no	no													
ID 77	Heating degree-days	yes		yes												
ID 78	Rainfall Deciles (observations)	yes			yes											
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	yes				yes										
ID 80	Annual average damage from river floods	no					no									
ID 81	Average annual heat-related deaths per 100,000 habitats	yes						yes								
ID 82	Growing Degree Days (observations and projections)	yes							yes							
ID 83	Chilling Units (observations)	yes								yes						
ID 84	Potential impact of river flooding on major roads	no									no					
ID 85	Potential impact of river flooding on railways	no										no				
ID 86	Potential impact of river flooding on settlements	no											no			
ID 87	Percentage change in arrivals/departures due to global warming	no												no		
ID 88	Annual olive-crop yield (observations)	yes													yes	
ID 89	Natural disasters	no														no

4. Type of underlying data

The following overview shows the compatibility assessment regarding the type of underlying data (observed or modelled). The red numbers mark nine single sheets, which are presented in detail on the following pages.



Type of underlying data (1)

	Name	atrribute	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13	ID 14	ID 15
ID 1	Arctic and Baltic Sea ice (observations / projections)	projected	projected														
ID 2	Bathing water quality	observed		observed													
ID 3	Chlorophyll in transitional, coastal and marine waters	observed			observed												
ID 4	Chlorophyll-a concentration (observations)	observed				observed											
ID 5	Climatic favourability of tree species (projections)	NA	NA	NA	NA	NA	NA										
ID 6	Coastal flood damage and adaptation costs (projections)	projected					NA	projected									
ID 7	Cold days	NA	NA	NA	NA	NA	NA	NA	NA								
ID 8	Cold nights	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 9	Cold spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 10	Consecutive dry days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 11	Consecutive wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
ID 12	Distribution of marine species	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
ID 13	Diurnal temperature range	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
ID 14	Extremely wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ID 15	Floods and health (observations)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	observed
ID 16	Freshwater biodiversity and water quality (observations)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 17	Frost days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 18	Glaciers (observations / projections)	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 19	Global and European Sea Level Rise (observations & projections)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 20	Greenland ice sheet (observations)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 21	Grow season length	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 22	Growing season for agriculture	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 23	Hazardous substances in marine organisms	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 24	heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 25	Ice days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 26	Lake and river ice cover	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 27	Lake and river ice phenology (observed)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 28	Lake Ice Extent (observations)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 29	Land elevation below projected sea-level (observations)	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 30	Max 1 day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 31	Max 5 day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 32	Maximum of daily minimum temperature)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 33	Maximum of daily maximum temperature)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 34	Mean precipitation (observations and projections)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 35	Minimum of daily minimum temperature	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 36	Minimum of daily maximum temperature	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 37	Moth Phenology Index (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 38	Number of wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 39	Nutrients in transitional, coastal and marine waters	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 40	Observed development of ocean acidification	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 41	Ocean heat content (observations)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 42	Permafrost (observations / projections)	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 43	Precipitation extremes (observations and projections)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 44	Projected change in average annual and seasonal river flow	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 45	Projected change in river floods with a return period of 100 years	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	

Type of underlying data (2)

	Name	atrribute	ID 16	ID 17	ID 18	ID 19	ID 20	ID 21	ID 22	ID 23	ID 24	ID 25	ID 26	ID 27	ID 28	ID 29	ID 30
ID 1	Arctic and Baltic Sea ice (observations / projections)	projected															
ID 2	Bathing water quality	observed															
ID 3	Chlorophyll in transitional, coastal and marine waters	observed															
ID 4	Chlorophyll-a concentration (observations)	observed															
ID 5	Climatic favourability of tree species (projections)	NA															
ID 6	Coastal flood damage and adaptation costs (projections)	projected															
ID 7	Cold days	NA															
ID 8	Cold nights	NA															
ID 9	Cold spell duration index	NA															
ID 10	Consecutive dry days	NA															
ID 11	Consecutive wet days	NA															
ID 12	Distribution of marine species	NA															
ID 13	Diurnal temperature range	NA															
ID 14	Extremely wet days	NA															
ID 15	Floods and health (observations)	observed															
ID 16	Freshwater biodiversity and water quality (observations)	observed	observed														
ID 17	Frost days	NA	NA	NA													
ID 18	Glaciers (observations / projections)	projected		NA	projected												
ID 19	Global and European Sea Level Rise (observations & projections)	observed		NA		observed											
ID 20	Greenland ice sheet (observations)	observed		NA			observed										
ID 21	Grow season length	observed		NA				observed									
ID 22	Growing season for agriculture	observed		NA					observed								
ID 23	Hazardous substances in marine organisms	observed		NA						observed							
ID 24	heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 25	Ice days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 26	Lake and river ice cover	observed		NA							NA	NA	observed				
ID 27	Lake and river ice phenology (observed)	observed		NA							NA	NA		observed			
ID 28	Lake Ice Extent (observations)	observed		NA							NA	NA			observed		
ID 29	Land elevation below projected sea-level (observations)	projected		NA							NA	NA				projected	
ID 30	Max 1 day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 31	Max 5 day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 32	Maximum of daily minimum temperature)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 33	Maximum of daily maximum temperature)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 34	Mean precipitation (observations and projections)	observed		NA							NA	NA					NA
ID 35	Minimum of daily minimum temperature	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 36	Minimum of daily maximum temperature	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 37	Moth Phenology Index (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 38	Number of wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 39	Nutrients in transitional, coastal and marine waters	observed		NA							NA	NA					NA
ID 40	Observed development of ocean acidification	observed		NA							NA	NA					NA
ID 41	Ocean heat content (observations)	observed		NA							NA	NA					NA
ID 42	Permafrost (observations / projections)	projected		NA							NA	NA					NA
ID 43	Precipitation extremes (observations and projections)	observed		NA							NA	NA					NA
ID 44	Projected change in average annual and seasonal river flow	projected		NA							NA	NA					NA
ID 45	Projected change in river floods with a return period of 100 years	projected		NA							NA	NA					NA

Type of underlying data (3)

	Name	atrribute	ID 31	ID 32	ID 33	ID 34	ID 35	ID 36	ID 37	ID 38	ID 39	ID 40	ID 41	ID 42	ID 43	ID 44	ID 45
ID 1	Arctic and Baltic Sea ice (observations / projections)	projected															
ID 2	Bathing water quality	observed															
ID 3	Chlorophyll in transitional, coastal and marine waters	observed															
ID 4	Chlorophyll-a concentration (observations)	observed															
ID 5	Climatic favourability of tree species (projections)	NA															
ID 6	Coastal flood damage and adaptation costs (projections)	projected															
ID 7	Cold days	NA															
ID 8	Cold nights	NA															
ID 9	Cold spell duration index	NA															
ID 10	Consecutive dry days	NA															
ID 11	Consecutive wet days	NA															
ID 12	Distribution of marine species	NA															
ID 13	Diurnal temperature range	NA															
ID 14	Extremely wet days	NA															
ID 15	Floods and health (observations)	observed															
ID 16	Freshwater biodiversity and water quality (observations)	observed															
ID 17	Frost days	NA															
ID 18	Glaciers (observations / projections)	projected															
ID 19	Global and European Sea Level Rise (observations & projections)	observed															
ID 20	Greenland ice sheet (observations)	observed															
ID 21	Grow season length	observed															
ID 22	Growing season for agriculture	observed															
ID 23	Hazardous substances in marine organisms	observed															
ID 24	heavy precipitation days	NA															
ID 25	Ice days	NA															
ID 26	Lake and river ice cover	observed															
ID 27	Lake and river ice phenology (observed)	observed															
ID 28	Lake Ice Extent (observations)	observed															
ID 29	Land elevation below projected sea-level (observations)	projected															
ID 30	Max 1 day precipitation	NA															
ID 31	Max 5 day precipitation	NA	NA														
ID 32	Maximum of daily minimum temperature)	NA	NA	NA													
ID 33	Maximum of daily maximum temperature)	NA	NA	NA	NA												
ID 34	Mean precipitation (observations and projections)	observed	NA	NA	NA	observed											
ID 35	Minimum of daily minimum temperature	NA	NA	NA	NA	NA	NA										
ID 36	Minimum of daily maximum temperature	NA	NA	NA	NA	NA	NA	NA									
ID 37	Moth Phenology Index (observations)	NA	NA	NA	NA	NA	NA	NA	NA								
ID 38	Number of wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 39	Nutrients in transitional, coastal and marine waters	observed	NA	NA	NA		NA	NA	NA	NA	observed						
ID 40	Observed development of ocean acidification	observed	NA	NA	NA		NA	NA	NA	NA		observed					
ID 41	Ocean heat content (observations)	observed	NA	NA	NA		NA	NA	NA	NA			observed				
ID 42	Permafrost (observations / projections)	projected	NA	NA	NA		NA	NA	NA	NA				projected			
ID 43	Precipitation extremes (observations and projections)	observed	NA	NA	NA		NA	NA	NA	NA					observed		
ID 44	Projected change in average annual and seasonal river flow	projected	NA	NA	NA		NA	NA	NA	NA						projected	
ID 45	Projected change in river floods with a return period of 100 years	projected	NA	NA	NA		NA	NA	NA	NA							projected

Type of underlying data (4)

	Name	atrribute	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13	ID 14	ID 15
ID 46	Projected changes in water-limited crop yield	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 47	Projection of ocean acidification	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 48	River floods (observation)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 49	River flow	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 50	River flow (projected)	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 51	River flow drought (observations and projections)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 52	Sea level change (observations)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 56	Snow cover (observations and projections)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 57	Snow extent (observations)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 58	Standardized SnowPack Index	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 59	Snow Water Equivalent	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 71	Water temperature (observations)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 72	water temperature (projections)	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 73	Water-limited crop productivity (projections)	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 74	Irrigation water requirement (observations and projections)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 75	Ocean acidification (observations and projections)	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 76	Intensity of urban heat island with city size	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 77	Heating degree-days	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 81	Average annual heat-related deaths per 100,000 habitats	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 85	Potential impact of river flooding on railways	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 86	Potential impact of river flooding on settlements	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 87	Percentage change in arrivals/departures due to global warming	projected					NA		NA	NA	NA	NA	NA	NA	NA	NA	
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	observed					NA		NA	NA	NA	NA	NA	NA	NA	NA	

Type of underlying data (5)

	Name	atrribute	ID 16	ID 17	ID 18	ID 19	ID 20	ID 21	ID 22	ID 23	ID 24	ID 25	ID 26	ID 27	ID 28	ID 29	ID 30
ID 46	Projected changes in water-limited crop yield	projected		NA							NA	NA					NA
ID 47	Projection of ocean acidification	projected		NA							NA	NA					NA
ID 48	River floods (observation)	observed		NA							NA	NA					NA
ID 49	River flow	observed		NA							NA	NA					NA
ID 50	River flow (projected)	projected		NA							NA	NA					NA
ID 51	River flow drought (observations and projections)	observed		NA							NA	NA					NA
ID 52	Sea level change (observations)	observed		NA							NA	NA					NA
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	observed		NA							NA	NA					NA
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 56	Snow cover (observations and projections)	observed		NA							NA	NA					NA
ID 57	Snow extent (observations)	observed		NA							NA	NA					NA
ID 58	Standardized SnowPack Index	observed		NA							NA	NA					NA
ID 59	Snow Water Equivalent	observed		NA							NA	NA					NA
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	observed		NA							NA	NA					NA
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	projected		NA							NA	NA					NA
ID 71	Water temperature (observations)	observed		NA							NA	NA					NA
ID 72	water temperature (projections)	projected		NA							NA	NA					NA
ID 73	Water-limited crop productivity (projections)	projected		NA							NA	NA					NA
ID 74	Irrigation water requirement (observations and projections)	observed		NA							NA	NA					NA
ID 75	Ocean acidification (observations and projections)	observed		NA							NA	NA					NA
ID 76	Intensity of urban heat island with city size	observed		NA							NA	NA					NA
ID 77	Heating degree-days	observed		NA							NA	NA					NA
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	observed		NA							NA	NA					NA
ID 81	Average annual heat-related deaths per 100,000 habitats	projected		NA							NA	NA					NA
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	projected		NA							NA	NA					NA
ID 85	Potential impact of river flooding on railways	projected		NA							NA	NA					NA
ID 86	Potential impact of river flooding on settlements	projected		NA							NA	NA					NA
ID 87	Percentage change in arrivals/departures due to global warming	projected		NA							NA	NA					NA
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	observed		NA							NA	NA					NA

Type of underlying data (6)

ID 46	Projected changes in water-limited crop yield	projected	NA	NA	NA		NA	NA	NA	NA							
ID 47	Projection of ocean acidification	projected	NA	NA	NA		NA	NA	NA	NA							
ID 48	River floods (observation)	observed	NA	NA	NA		NA	NA	NA	NA							
ID 49	River flow	observed	NA	NA	NA		NA	NA	NA	NA							
ID 50	River flow (projected)	projected	NA	NA	NA		NA	NA	NA	NA							
ID 51	River flow drought (observations and projections)	observed	NA	NA	NA		NA	NA	NA	NA							
ID 52	Sea level change (observations)	observed	NA	NA	NA		NA	NA	NA	NA							
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	observed	NA	NA	NA		NA	NA	NA	NA							
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 56	Snow cover (observations and projections)	observed	NA	NA	NA		NA	NA	NA	NA							
ID 57	Snow extent (observations)	observed	NA	NA	NA		NA	NA	NA	NA							
ID 58	Standardized SnowPack Index	observed	NA	NA	NA		NA	NA	NA	NA							
ID 59	Snow Water Equivalent	observed	NA	NA	NA		NA	NA	NA	NA							
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	observed	NA	NA	NA		NA	NA	NA	NA							
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	projected	NA	NA	NA		NA	NA	NA	NA							
ID 71	Water temperature (observations)	observed	NA	NA	NA		NA	NA	NA	NA							
ID 72	water temperature (projections)	projected	NA	NA	NA		NA	NA	NA	NA							
ID 73	Water-limited crop productivity (projections)	projected	NA	NA	NA		NA	NA	NA	NA							
ID 74	Irrigation water requirement (observations and projections)	observed	NA	NA	NA		NA	NA	NA	NA							
ID 75	Ocean acidification (observations and projections)	observed	NA	NA	NA		NA	NA	NA	NA							
ID 76	Intensity of urban heat island with city size	observed	NA	NA	NA		NA	NA	NA	NA							
ID 77	Heating degree-days	observed	NA	NA	NA		NA	NA	NA	NA							
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	observed	NA	NA	NA		NA	NA	NA	NA							
ID 81	Average annual heat-related deaths per 100,000 habitats	projected	NA	NA	NA		NA	NA	NA	NA							
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	projected	NA	NA	NA		NA	NA	NA	NA							
ID 85	Potential impact of river flooding on railways	projected	NA	NA	NA		NA	NA	NA	NA							
ID 86	Potential impact of river flooding on settlements	projected	NA	NA	NA		NA	NA	NA	NA							
ID 87	Percentage change in arrivals/departures due to global warming	projected	NA	NA	NA		NA	NA	NA	NA							
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	observed	NA	NA	NA		NA	NA	NA	NA							

Type of underlying data (7)

	Name	atrribute	ID 46	ID 47	ID 48	ID 49	ID 50	ID 51	ID 52	ID 53	ID 54	ID 55	ID 56	ID 57	ID 58	ID 59	ID 60
ID 46	Projected changes in water-limited crop yield	projected	projected														
ID 47	Projection of ocean acidification	projected		projected													
ID 48	River floods (observation)	observed			observed												
ID 49	River flow	observed				observed											
ID 50	River flow (projected)	projected					projected										
ID 51	River flow drought (observations and projections)	observed						observed									
ID 52	Sea level change (observations)	observed							observed								
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 54	Sea surface temperature (observations)	observed								NA	observed						
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 56	Snow cover (observations and projections)	observed								NA		NA	observed				
ID 57	Snow extent (observations)	observed								NA		NA		observed			
ID 58	Standardized SnowPack Index	observed								NA		NA			observed		
ID 59	Snow Water Equivalent	observed								NA		NA				observed	
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	observed								NA		NA					NA
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	projected								NA		NA					NA
ID 71	Water temperature (observations)	observed								NA		NA					NA
ID 72	water temperature (projections)	projected								NA		NA					NA
ID 73	Water-limited crop productivity (projections)	projected								NA		NA					NA
ID 74	Irrigation water requirement (observations and projections)	observed								NA		NA					NA
ID 75	Ocean acidification (observations and projections)	observed								NA		NA					NA
ID 76	Intensity of urban heat island with city size	observed								NA		NA					NA
ID 77	Heating degree-days	observed								NA		NA					NA
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	observed								NA		NA					NA
ID 81	Average annual heat-related deaths per 100,000 habitats	projected								NA		NA					NA
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	projected								NA		NA					NA
ID 85	Potential impact of river flooding on railways	projected								NA		NA					NA
ID 86	Potential impact of river flooding on settlements	projected								NA		NA					NA
ID 87	Percentage change in arrivals/departures due to global warming	projected								NA		NA					NA
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	observed								NA		NA					NA

Type of underlying data (8)

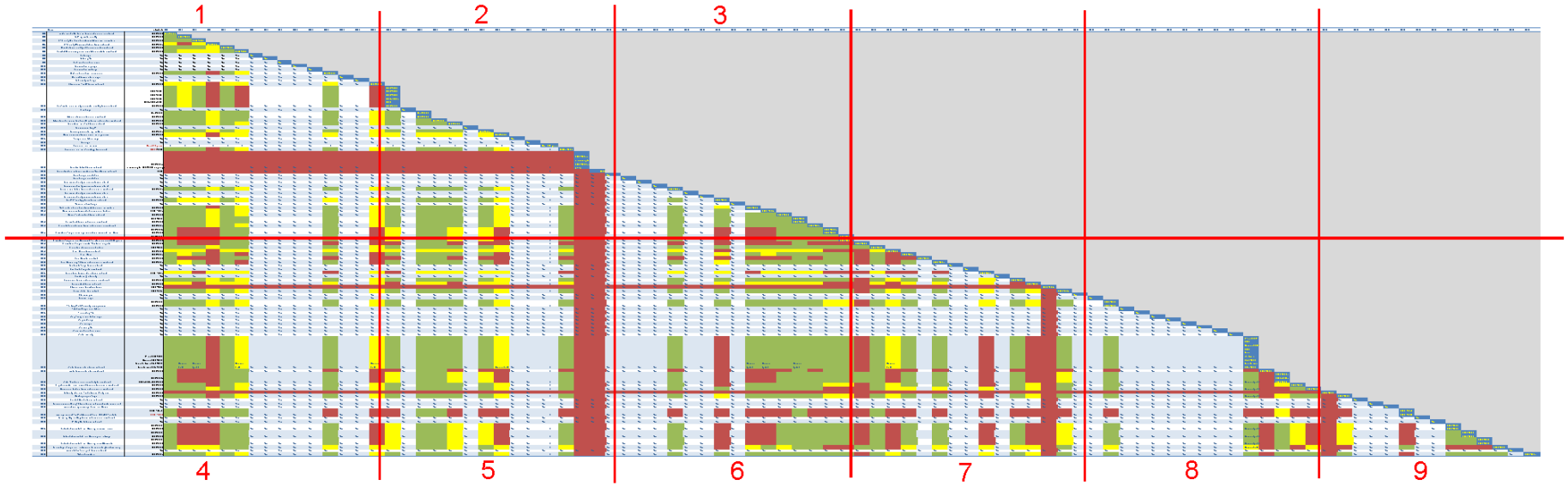
	Name	atrribute	ID 61	ID 62	ID 63	ID 64	ID 65	ID 66	ID 67	ID 68	ID 69	ID 70	ID 71	ID 72	ID 73	ID 74	ID 75
ID 46	Projected changes in water-limited crop yield	projected															
ID 47	Projection of ocean acidification	projected															
ID 48	River floods (observation)	observed															
ID 49	River flow	observed															
ID 50	River flow (projected)	projected															
ID 51	River flow drought (observations and projections)	observed															
ID 52	Sea level change (observations)	observed															
ID 53	Sea level change (projections)	NA															
ID 54	Sea surface temperature (observations)	observed															
ID 55	Simple daily intensity	NA															
ID 56	Snow cover (observations and projections)	observed															
ID 57	Snow extent (observations)	observed															
ID 58	Standardized SnowPack Index	observed															
ID 59	Snow Water Equivalent	observed															
ID 60	Storm surges	NA															
ID 61	Summer days	NA	NA														
ID 62	The length of thermal growing season	observed	NA	observed													
ID 63	Total wet-day precipitation	NA	NA	NA	NA												
ID 64	Tropical nights	NA	NA	NA	NA	NA											
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA										
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA									
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA								
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 70	Water scarcity	projected	NA		NA	NA	NA	NA	NA	NA	NA	projected					
ID 71	Water temperature (observations)	observed	NA		NA	NA	NA	NA	NA	NA	NA		observed				
ID 72	water temperature (projections)	projected	NA		NA	NA	NA	NA	NA	NA	NA			projected			
ID 73	Water-limited crop productivity (projections)	projected	NA		NA	NA	NA	NA	NA	NA	NA				projected		
ID 74	Irrigation water requirement (observations and projections)	observed	NA		NA	NA	NA	NA	NA	NA	NA					observed	
ID 75	Ocean acidification (observations and projections)	observed	NA		NA	NA	NA	NA	NA	NA	NA						observed
ID 76	Intensity of urban heat island with city size	observed	NA		NA	NA	NA	NA	NA	NA	NA						
ID 77	Heating degree-days	observed	NA		NA	NA	NA	NA	NA	NA	NA						
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	observed	NA		NA	NA	NA	NA	NA	NA	NA						
ID 81	Average annual heat-related deaths per 100,000 habitats	projected	NA		NA	NA	NA	NA	NA	NA	NA						
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	projected	NA		NA	NA	NA	NA	NA	NA	NA						
ID 85	Potential impact of river flooding on railways	projected	NA		NA	NA	NA	NA	NA	NA	NA						
ID 86	Potential impact of river flooding on settlements	projected	NA		NA	NA	NA	NA	NA	NA	NA						
ID 87	Percentage change in arrivals/departures due to global warming	projected	NA		NA	NA	NA	NA	NA	NA	NA						
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	observed	NA		NA	NA	NA	NA	NA	NA	NA						

Type of underlying data (9)

	Name	atrribute	ID 76	ID 77	ID 78	ID 79	ID 80	ID 81	ID 82	ID 83	ID 84	ID 85	ID 86	ID 87	ID 88	ID 89
ID 46	Projected changes in water-limited crop yield	projected														
ID 47	Projection of ocean acidification	projected														
ID 48	River floods (observation)	observed														
ID 49	River flow	observed														
ID 50	River flow (projected)	projected														
ID 51	River flow drought (observations and projections)	observed														
ID 52	Sea level change (observations)	observed														
ID 53	Sea level change (projections)	NA														
ID 54	Sea surface temperature (observations)	observed														
ID 55	Simple daily intensity	NA														
ID 56	Snow cover (observations and projections)	observed														
ID 57	Snow extent (observations)	observed														
ID 58	Standardized SnowPack Index	observed														
ID 59	Snow Water Equivalent	observed														
ID 60	Storm surges	NA														
ID 61	Summer days	NA														
ID 62	The length of thermal growing season	observed														
ID 63	Total wet-day precipitation	NA														
ID 64	Tropical nights	NA														
ID 65	Very heavy precipitation days	NA														
ID 66	Very wet days	NA														
ID 67	Warm days	NA														
ID 68	Warm nights	NA														
ID 69	Warm spell duration index	NA														
ID 70	Water scarcity	projected														
ID 71	Water temperature (observations)	observed														
ID 72	water temperature (projections)	projected														
ID 73	Water-limited crop productivity (projections)	projected														
ID 74	Irrigation water requirement (observations and projections)	observed														
ID 75	Ocean acidification (observations and projections)	observed														
ID 76	Intensity of urban heat island with city size	observed	observed													
ID 77	Heating degree-days	observed		observed												
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA											
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA										
ID 80	Annual average damage from river floods	observed			NA	NA	observed									
ID 81	Average annual heat-related deaths per 100,000 habitats	projected			NA	NA		projected								
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA							
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 84	Potential impact of river flooding on major roads	projected			NA	NA			NA	NA	projected					
ID 85	Potential impact of river flooding on railways	projected			NA	NA			NA	NA		projected				
ID 86	Potential impact of river flooding on settlements	projected			NA	NA			NA	NA			projected			
ID 87	Percentage change in arrivals/departures due to global warming	projected			NA	NA			NA	NA				projected		
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ID 89	Natural disasters	observed			NA	NA			NA	NA					NA	observed

5. Overlap of time periods

The following overview shows the compatibility assessment concerning the overlap of time periods of all indicators. The red numbers mark nine single sheets, which are presented in detail on the following pages.



Overlap of time periods (1)

	Name	atribute	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13	ID 14	ID 15
ID 1	Arctic and Baltic Sea ice (observations / projections)	1750-2100	1750-2100														
ID 2	Bathing water quality	1990-2011		1990-2011													
ID 3	Chlorophyll in transitional, coastal and marine waters	1985-2010			1985-2010												
ID 4	Chlorophyll-a concentration (observations)	2003-2014				2003-2014											
ID 5	Climatic favourability of tree species (projections)	1971-2100					1971-2100										
ID 6	Coastal flood damage and adaptation costs (projections)	2000-2100						2000-2100									
ID 7	Cold days	NA	NA	NA	NA	NA	NA	NA	NA								
ID 8	Cold nights	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 9	Cold spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 10	Consecutive dry days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 11	Consecutive wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
ID 12	Distribution of marine species	1958-2009							NA	NA	NA	NA	NA	1958-2009			
ID 13	Diurnal temperature range	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
ID 14	Extremely wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ID 15	Floods and health (observations)	2000-2011							NA	NA	NA	NA	NA		NA	NA	2000-2011
ID 16	Freshwater biodiversity and water quality (observations)	1960–1970; 1985–1995; **1980–2007**; 1956, 1991, 2003; 1983-2007							NA	NA	NA	NA	NA		NA	NA	
ID 17	Frost days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 18	Glaciers (observations / projections)	1945-2012; 2006-2100							NA	NA	NA	NA	NA		NA	NA	
ID 19	Global and European Sea Level Rise (observations & projections)	1880-2100							NA	NA	NA	NA	NA		NA	NA	
ID 20	Greenland ice sheet (observations)	1979-2012							NA	NA	NA	NA	NA		NA	NA	
ID 21	Grow season length	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 22	Growing season for agriculture	1975-2014							NA	NA	NA	NA	NA		NA	NA	
ID 23	Hazardous substances in marine organisms	1998-2010							NA	NA	NA	NA	NA		NA	NA	
ID 24	heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 25	Ice days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 26	Lake and river ice cover	Over 150 years	?	?	?	?	?	?	NA	NA	NA	NA	NA	?	NA	NA	?
ID 27	Lake and river ice phenology (observed)	(1)874-2009							NA	NA	NA	NA	NA		NA	NA	
ID 28	Lake Ice Extent (observations)	2013-2014, processing for 2000-2013 on going.							NA	NA	NA	NA	NA		NA	NA	
ID 29	Land elevation below projected sea-level (observations)	2100							NA	NA	NA	NA	NA		NA	NA	
ID 30	Max 1 day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 31	Max 5 day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 32	Maximum of daily minimum temperature)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 33	Maximum of daily maximum temperature)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 34	Mean precipitation (observations and projections)	1960-2014							NA	NA	NA	NA	NA		NA	NA	
ID 35	Minimum of daily minimum temperature	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 36	Minimum of daily maximum temperature	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 37	Moth Phenology Index (observations)	1993-2012							NA	NA	NA	NA	NA		NA	NA	
ID 38	Number of wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 39	Nutrients in transitional, coastal and marine waters	1985-2010							NA	NA	NA	NA	NA		NA	NA	
ID 40	Observed development of ocean acidification	1988 - 2014							NA	NA	NA	NA	NA		NA	NA	
ID 41	Ocean heat content (observations)	1957-2013							NA	NA	NA	NA	NA		NA	NA	
ID 42	Permafrost (observations / projections)	1987-2013; 1981-2099							NA	NA	NA	NA	NA		NA	NA	
ID 43	Precipitation extremes (observations and projections)	1960-2014							NA	NA	NA	NA	NA		NA	NA	
ID 44	Projected change in average annual and seasonal river flow	1961-1990, 2071-2098							NA	NA	NA	NA	NA		NA	NA	
ID 45	Projected change in river floods with a return period of 100 years	1961-1990, 2071-2098							NA	NA	NA	NA	NA		NA	NA	

Overlap of time periods (2)

	Name	attribute	ID 16	ID 17	ID 18	ID 19	ID 20	ID 21	ID 22	ID 23	ID 24	ID 25	ID 26	ID 27	ID 28	ID 29	ID 30
ID 1	Arctic and Baltic Sea ice (observations / projections)	1750-2100															
ID 2	Bathing water quality	1990-2011															
ID 3	Chlorophyll in transitional, coastal and marine waters	1985-2010															
ID 4	Chlorophyll-a concentration (observations)	2003-2014															
ID 5	Climatic favourability of tree species (projections)	1971-2100															
ID 6	Coastal flood damage and adaptation costs (projections)	2000-2100															
ID 7	Cold days	NA															
ID 8	Cold nights	NA															
ID 9	Cold spell duration index	NA															
ID 10	Consecutive dry days	NA															
ID 11	Consecutive wet days	NA															
ID 12	Distribution of marine species	1958-2009															
ID 13	Diurnal temperature range	NA															
ID 14	Extremely wet days	NA															
ID 15	Floods and health (observations)	2000-2011															
ID 16	Freshwater biodiversity and water quality (observations)	1960–1970; 1985–1995; **1980–2007**; 1956, 1991, 2003; 1983-2007	1960–1970; 1985–1995; **1980–2007**; 1956, 1991, 2003; 1983-2007														
ID 17	Frost days	NA	NA	NA													
ID 18	Glaciers (observations / projections)	1945-2012; 2006-2100		NA	1945-2012; 2006-2100												
ID 19	Global and European Sea Level Rise (observations & projections)	1880-2100		NA		1880-2100											
ID 20	Greenland ice sheet (observations)	1979-2012		NA			1979-2012										
ID 21	Grow season length	NA	NA	NA	NA	NA	NA	NA									
ID 22	Growing season for agriculture	1975-2014		NA				NA	1975-2014								
ID 23	Hazardous substances in marine organisms	1998-2010		NA				NA		1998-2010							
ID 24	heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 25	Ice days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 26	Lake and river ice cover	Over 150 years	?	NA	?	?	?	NA	?	?	NA	NA	Over 150 years				
ID 27	Lake and river ice phenology (observed)	(1)874-2009		NA				NA			NA	NA	?	(1)874-2009			
ID 28	Lake Ice Extent (observations)	2013-2014, processing for 2000-2013 on going,		NA				NA			NA	NA	?		2013-2014, processing for 2000-2013 on going		
ID 29	Land elevation below projected sea-level (observations)	2100		NA				NA			NA	NA	?			2100	
ID 30	Max 1 day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 31	Max 5 day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 32	Maximum of daily minimum temperature)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 33	Maximum of daily maximum temperature)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 34	Mean precipitation (observations and projections)	1960-2014		NA				NA			NA	NA	?				NA
ID 35	Minimum of daily minimum temperature	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 36	Minimum of daily maximum temperature	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 37	Moth Phenology Index (observations)	1993-2012		NA				NA			NA	NA	?				NA
ID 38	Number of wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 39	Nutrients in transitional, coastal and marine waters	1985-2010		NA				NA			NA	NA	?				NA
ID 40	Observed development of ocean acidification	1988 - 2014		NA				NA			NA	NA	?				NA
ID 41	Ocean heat content (observations)	1957-2013		NA				NA			NA	NA	?				NA
ID 42	Permafrost (observations / projections)	1987-2013; 1981-2099		NA				NA			NA	NA	?				NA
ID 43	Precipitation extremes (observations and projections)	1960-2014		NA				NA			NA	NA	?				NA
ID 44	Projected change in average annual and seasonal river flow	1961-1990, 2071-2098		NA				NA			NA	NA	?				NA
ID 45	Projected change in river floods with a return period of 100 years	1961-1990, 2071-2098		NA				NA			NA	NA	?				NA

Overlap of time periods (3)

	Name	atrribute	ID 31	ID 32	ID 33	ID 34	ID 35	ID 36	ID 37	ID 38	ID 39	ID 40	ID 41	ID 42	ID 43	ID 44	ID 45
ID 1	Arctic and Baltic Sea ice (observations / projections)	1750-2100															
ID 2	Bathing water quality	1990-2011															
ID 3	Chlorophyll in transitional, coastal and marine waters	1985-2010															
ID 4	Chlorophyll-a concentration (observations)	2003-2014															
ID 5	Climatic favourability of tree species (projections)	1971-2100															
ID 6	Coastal flood damage and adaptation costs (projections)	2000-2100															
ID 7	Cold days	NA															
ID 8	Cold nights	NA															
ID 9	Cold spell duration index	NA															
ID 10	Consecutive dry days	NA															
ID 11	Consecutive wet days	NA															
ID 12	Distribution of marine species	1958-2009															
ID 13	Diurnal temperature range	NA															
ID 14	Extremely wet days	NA															
ID 15	Floods and health (observations)	2000-2011															
ID 16	Freshwater biodiversity and water quality (observations)	1960–1970; 1985–1995; **1980–2007**; 1956, 1991, 2003; 1983-2007															
ID 17	Frost days	NA															
ID 18	Glaciers (observations / projections)	1945-2012; 2006-2100															
ID 19	Global and European Sea Level Rise (observations & projections)	1880-2100															
ID 20	Greenland ice sheet (observations)	1979-2012															
ID 21	Grow season length	NA															
ID 22	Growing season for agriculture	1975-2014															
ID 23	Hazardous substances in marine organisms	1998-2010															
ID 24	heavy precipitation days	NA															
ID 25	Ice days	NA															
ID 26	Lake and river ice cover	Over 150 years															
ID 27	Lake and river ice phenology (observed)	(1)874-2009															
ID 28	Lake Ice Extent (observations)	2013-2014, processing for 2000-2013 on going.															
ID 29	Land elevation below projected sea-level (observations)	2100															
ID 30	Max 1 day precipitation	NA															
ID 31	Max 5 day precipitation	NA	NA														
ID 32	Maximum of daily minimum temperature)	NA	NA	NA													
ID 33	Maximum of daily maximum temperature)	NA	NA	NA	NA												
ID 34	Mean precipitation (observations and projections)	1960-2014	NA	NA	NA	1960-2014											
ID 35	Minimum of daily minimum temperature	NA	NA	NA	NA	NA	NA										
ID 36	Minimum of daily maximum temperature	NA	NA	NA	NA	NA	NA	NA									
ID 37	Moth Phenology Index (observations)	1993-2012	NA	NA	NA		NA	NA	1993-2012								
ID 38	Number of wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 39	Nutrients in transitional, coastal and marine waters	1985-2010	NA	NA	NA		NA	NA		NA	1985-2010						
ID 40	Observed development of ocean acidification	1988 - 2014	NA	NA	NA		NA	NA		NA		1988 - 2014					
ID 41	Ocean heat content (observations)	1957-2013	NA	NA	NA		NA	NA		NA			1957-2013				
ID 42	Permafrost (observations / projections)	1987-2013; 1981-2099	NA	NA	NA		NA	NA		NA				1987-2013; 1981-2099			
ID 43	Precipitation extremes (observations and projections)	1960-2014	NA	NA	NA		NA	NA		NA					1960-2014		
ID 44	Projected change in average annual and seasonal river flow	1961-1990, 2071-2098	NA	NA	NA		NA	NA		NA						1961-1990, 2071-2098	
ID 45	Projected change in river floods with a return period of 100 years	1961-1990, 2071-2098	NA	NA	NA		NA	NA		NA							1961-1990, 2071-2098

Overlap of time periods (4)

	Name	atrribute	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13	ID 14	ID 15
ID 46	Projected changes in water-limited crop yield	2030-2050							NA	NA	NA	NA	NA		NA	NA	
ID 47	Projection of ocean acidification	1850-2100							NA	NA	NA	NA	NA		NA	NA	
ID 48	River floods (observation)	1998-2009							NA	NA	NA	NA	NA		NA	NA	
ID 49	River flow	1962-2004							NA	NA	NA	NA	NA		NA	NA	
ID 50	River flow (projected)	2071-2098							NA	NA	NA	NA	NA		NA	NA	
ID 51	River flow drought (observations and projections)	1962-2004							NA	NA	NA	NA	NA		NA	NA	
ID 52	Sea level change (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	2002 - 2014							NA	NA	NA	NA	NA		NA	NA	
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 56	Snow cover (observations and projections)	1922-2013							NA	NA	NA	NA	NA		NA	NA	
ID 57	Snow extent (observations)	1995-2012							NA	NA	NA	NA	NA		NA	NA	
ID 58	Standardized SnowPack Index	2010–2014							NA	NA	NA	NA	NA		NA	NA	
ID 59	Snow Water Equivalent	1979–2014							NA	NA	NA	NA	NA		NA	NA	
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	1979-2013; 1950-2013							NA	NA	NA	NA	NA		NA	NA	
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 71	Water temperature (observations)	Rhine 1911-2010; Danube 1901-1998; Lake Vörtsjärv 1947-2011; Lake Saimaa 1924-2011		Danube (rot)	Danube (gelb)			Danube (rot)	NA	NA	NA	NA	NA		NA	NA	Danube (rot)
ID 72	water temperature (projections)	2071-2100							NA	NA	NA	NA	NA		NA	NA	
ID 73	Water-limited crop productivity (projections)	1961-1990, 2000, 2020, 2031-2060							NA	NA	NA	NA	NA		NA	NA	
ID 74	Irrigation water requirement (observations and projections)	1975-2010							NA	NA	NA	NA	NA		NA	NA	
ID 75	Ocean acidification (observations and projections)	1988-2012							NA	NA	NA	NA	NA		NA	NA	
ID 76	Intensity of urban heat island with city size	2006-2008							NA	NA	NA	NA	NA		NA	NA	
ID 77	Heating degree-days	1980-2010							NA	NA	NA	NA	NA		NA	NA	
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	2011 - 2040; 2017 - 2011							NA	NA	NA	NA	NA		NA	NA	
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	1961-1990; 2071-2100							NA	NA	NA	NA	NA		NA	NA	
ID 85	Potential impact of river flooding on railways	1961-1990; 2071-2100							NA	NA	NA	NA	NA		NA	NA	
ID 86	Potential impact of river flooding on settlements	1961-1990; 2071-2100							NA	NA	NA	NA	NA		NA	NA	
ID 87	Percentage change in arrivals/departures due to global warming	1995-2075							NA	NA	NA	NA	NA		NA	NA	
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	1900-2014							NA	NA	NA	NA	NA		NA	NA	

Overlap of time periods (5)

	Name	attribute	ID 16	ID 17	ID 18	ID 19	ID 20	ID 21	ID 22	ID 23	ID 24	ID 25	ID 26	ID 27	ID 28	ID 29	ID 30
ID 46	Projected changes in water-limited crop yield	2030-2050		NA				NA			NA	NA	?				NA
ID 47	Projection of ocean acidification	1850-2100		NA				NA			NA	NA	?				NA
ID 48	River floods (observation)	1998-2009		NA				NA			NA	NA	?				NA
ID 49	River flow	1962-2004		NA				NA			NA	NA	?				NA
ID 50	River flow (projected)	2071-2098		NA				NA			NA	NA	?				NA
ID 51	River flow drought (observations and projections)	1962-2004		NA				NA			NA	NA	?				NA
ID 52	Sea level change (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	2002 - 2014		NA				NA			NA	NA	?				NA
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 56	Snow cover (observations and projections)	1922-2013		NA				NA			NA	NA	?				NA
ID 57	Snow extent (observations)	1995-2012		NA				NA			NA	NA	?				NA
ID 58	Standardized SnowPack Index	2010–2014		NA				NA			NA	NA					NA
ID 59	Snow Water Equivalent	1979–2014		NA				NA			NA	NA	?				NA
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	1979-2013; 1950-2013		NA				NA			NA	NA	?				NA
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 71	Water temperature (observations)	Rhine 1911-2010; Danube 1901-1998; Lake Võrtsjärv 1947-2011; Lake Saimaa 1924-2011		NA				NA		Danube (rot)	NA	NA	?				NA
ID 72	water temperature (projections)	2071-2100		NA				NA			NA	NA	?				NA
ID 73	Water-limited crop productivity (projections)	1961-1990, 2000, 2020, 2031-2060		NA				NA			NA	NA	?				NA
ID 74	Irrigation water requirement (observations and projections)	1975-2010		NA				NA			NA	NA	?				NA
ID 75	Ocean acidification (observations and projections)	1988-2012		NA				NA			NA	NA	?				NA
ID 76	Intensity of urban heat island with city size	2006-2008		NA				NA			NA	NA					NA
ID 77	Heating degree-days	1980-2010		NA				NA			NA	NA	?				NA
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	2011 - 2040; 2017 - 2011		NA				NA			NA	NA	?				NA
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	1961-1990; 2071-2100		NA				NA			NA	NA	?				NA
ID 85	Potential impact of river flooding on railways	1961-1990; 2071-2100		NA				NA			NA	NA	?				NA
ID 86	Potential impact of river flooding on settlements	1961-1990; 2071-2100		NA				NA			NA	NA	?				NA
ID 87	Percentage change in arrivals/departures due to global warming	1995-2075		NA				NA			NA	NA	?				NA
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	1900-2014		NA				NA			NA	NA	?				NA

Overlap of time periods (6)

	Name	atrribute	ID 31	ID 32	ID 33	ID 34	ID 35	ID 36	ID 37	ID 38	ID 39	ID 40	ID 41	ID 42	ID 43	ID 44	ID 45
ID 46	Projected changes in water-limited crop yield	2030-2050	NA	NA	NA		NA	NA		NA							
ID 47	Projection of ocean acidification	1850-2100	NA	NA	NA		NA	NA		NA							
ID 48	River floods (observation)	1998-2009	NA	NA	NA		NA	NA		NA							
ID 49	River flow	1962-2004	NA	NA	NA		NA	NA		NA							
ID 50	River flow (projected)	2071-2098	NA	NA	NA		NA	NA		NA							
ID 51	River flow drought (observations and projections)	1962-2004	NA	NA	NA		NA	NA		NA							
ID 52	Sea level change (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	2002 - 2014	NA	NA	NA		NA	NA		NA							
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 56	Snow cover (observations and projections)	1922-2013	NA	NA	NA		NA	NA		NA							
ID 57	Snow extent (observations)	1995-2012	NA	NA	NA		NA	NA		NA							
ID 58	Standardized SnowPack Index	2010–2014	NA	NA	NA		NA	NA		NA							
ID 59	Snow Water Equivalent	1979–2014	NA	NA	NA		NA	NA		NA							
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	1979-2013; 1950-2013	NA	NA	NA		NA	NA		NA							
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 71	Water temperature (observations)	Rhine 1911-2010; Danube 1901-1998; Lake Võrtsjärv 1947-2011; Lake Saimaa 1924-2011	NA	NA	NA		NA	NA		NA	Danube (gelb)	Danube (gelb)		Danube (gelb)			
ID 72	water temperature (projections)	2071-2100	NA	NA	NA		NA	NA		NA							
ID 73	Water-limited crop productivity (projections)	1961-1990, 2000, 2020, 2031-2060	NA	NA	NA		NA	NA		NA							
ID 74	Irrigation water requirement (observations and projections)	1975-2010	NA	NA	NA		NA	NA		NA							
ID 75	Ocean acidification (observations and projections)	1988-2012	NA	NA	NA		NA	NA		NA							
ID 76	Intensity of urban heat island with city size	2006-2008	NA	NA	NA		NA	NA		NA							
ID 77	Heating degree-days	1980-2010	NA	NA	NA		NA	NA		NA							
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	2011 - 2040; 2017 - 2011	NA	NA	NA		NA	NA		NA							
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	1961-1990; 2071-2100	NA	NA	NA		NA	NA		NA							
ID 85	Potential impact of river flooding on railways	1961-1990; 2071-2100	NA	NA	NA		NA	NA		NA							
ID 86	Potential impact of river flooding on settlements	1961-1990; 2071-2100	NA	NA	NA		NA	NA		NA							
ID 87	Percentage change in arrivals/departures due to global warming	1995-2075	NA	NA	NA		NA	NA		NA							
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	1900-2014	NA	NA	NA		NA	NA		NA							

Overlap of time periods (7)

	Name	atrribute	ID 46	ID 47	ID 48	ID 49	ID 50	ID 51	ID 52	ID 53	ID 54	ID 55	ID 56	ID 57	ID 58	ID 59	ID 60
ID 46	Projected changes in water-limited crop yield	2030-2050	2030-2050														
ID 47	Projection of ocean acidification	1850-2100		1850-2100													
ID 48	River floods (observation)	1998-2009			1998-2009												
ID 49	River flow	1962-2004				1962-2004											
ID 50	River flow (projected)	2071-2098					2071-2098										
ID 51	River flow drought (observations and projections)	1962-2004						1962-2004									
ID 52	Sea level change (observations)	NA	NA	NA	NA	NA	NA	NA	NA								
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 54	Sea surface temperature (observations)	2002 - 2014							NA	NA	2002-2014						
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 56	Snow cover (observations and projections)	1922-2013							NA	NA		NA	1922-2013				
ID 57	Snow extent (observations)	1995-2012							NA	NA		NA		1995-2012			
ID 58	Standardized SnowPack Index	2010–2014							NA	NA		NA			2010–2014		
ID 59	Snow Water Equivalent	1979–2014							NA	NA		NA				1979–2014	
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	1979-2013; 1950-2013							NA	NA		NA					NA
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 71	Water temperature (observations)	Rhine 1911-2010; Danube 1901-1998; Lake Võrtsjärv 1947-2011; Lake Saimaa 1924-2011			Danube (rot)				NA	NA		NA					NA
ID 72	water temperature (projections)	2071-2100							NA	NA		NA					NA
ID 73	Water-limited crop productivity (projections)	1961-1990, 2000, 2020, 2031-2060							NA	NA		NA					NA
ID 74	Irrigation water requirement (observations and projections)	1975-2010							NA	NA		NA					NA
ID 75	Ocean acidification (observations and projections)	1988-2012							NA	NA		NA					NA
ID 76	Intensity of urban heat island with city size	2006-2008							NA	NA		NA					NA
ID 77	Heating degree-days	1980-2010							NA	NA		NA					NA
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	2011 - 2040; 2017 - 2011							NA	NA		NA					NA
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	1961-1990; 2071-2100							NA	NA		NA					NA
ID 85	Potential impact of river flooding on railways	1961-1990; 2071-2100							NA	NA		NA					NA
ID 86	Potential impact of river flooding on settlements	1961-1990; 2071-2100							NA	NA		NA					NA
ID 87	Percentage change in arrivals/departures due to global warming	1995-2075							NA	NA		NA					NA
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	1900-2014							NA	NA		NA					NA

Overlap of time periods (8)

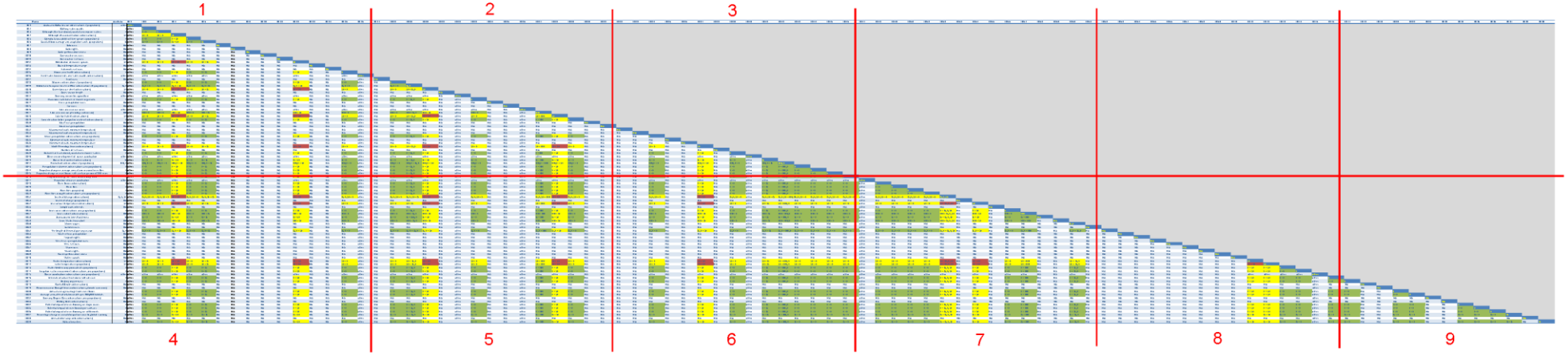
	Name	atrribute	ID 61	ID 62	ID 63	ID 64	ID 65	ID 66	ID 67	ID 68	ID 69	ID 70	ID 71	ID 72	ID 73	ID 74	ID 75
ID 46	Projected changes in water-limited crop yield	2030-2050															
ID 47	Projection of ocean acidification	1850-2100															
ID 48	River floods (observation)	1998-2009															
ID 49	River flow	1962-2004															
ID 50	River flow (projected)	2071-2098															
ID 51	River flow drought (observations and projections)	1962-2004															
ID 52	Sea level change (observations)	NA															
ID 53	Sea level change (projections)	NA															
ID 54	Sea surface temperature (observations)	2002 - 2014															
ID 55	Simple daily intensity	NA															
ID 56	Snow cover (observations and projections)	1922-2013															
ID 57	Snow extent (observations)	1995-2012															
ID 58	Standardized SnowPack Index	2010–2014															
ID 59	Snow Water Equivalent	1979–2014															
ID 60	Storm surges	NA															
ID 61	Summer days	NA	NA														
ID 62	The length of thermal growing season	1979-2013; 1950-2013	NA	1979-2013; 1950-2013													
ID 63	Total wet-day precipitation	NA	NA	NA	NA												
ID 64	Tropical nights	NA	NA	NA	NA	NA											
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA										
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA									
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA								
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 70	Water scarcity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 71	Water temperature (observations)	Rhine 1911-2010; Danube 1901-1998; Lake Vörtsjärv 1947-2011; Lake Saimaa 1924-2011	NA		NA	NA	NA	NA	NA	NA	NA	NA	Rhine 1911-2010; Danube 1901-1998; Lake Vörtsjärv 1947-2011; Lake Saimaa 1924-2011				
ID 72	water temperature (projections)	2071-2100	NA		NA	NA	NA	NA	NA	NA	NA	NA		2071-2100			
ID 73	Water-limited crop productivity (projections)	1961-1990, 2000, 2020, 2031-2060	NA		NA	NA	NA	NA	NA	NA	NA	NA	Danube (gelb)		1961-1990, 2000, 2020, 2031-2060		
ID 74	Irrigation water requirement (observations and projections)	1975-2010	NA		NA	NA	NA	NA	NA	NA	NA	NA				1975-2010	
ID 75	Ocean acidification (observations and projections)	1988-2012	NA		NA	NA	NA	NA	NA	NA	NA	NA	Danube (gelb)				1988-2012
ID 76	Intensity of urban heat island with city size	2006-2008	NA		NA	NA	NA	NA	NA	NA	NA	NA					
ID 77	Heating degree-days	1980-2010	NA		NA	NA	NA	NA	NA	NA	NA	NA	Danube (gelb)				
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	2011 - 2040; 2017 - 2011	NA		NA	NA	NA	NA	NA	NA	NA	NA					
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	1961-1990; 2071-2100	NA		NA	NA	NA	NA	NA	NA	NA	NA	Danube (gelb)				
ID 85	Potential impact of river flooding on railways	1961-1990; 2071-2100	NA		NA	NA	NA	NA	NA	NA	NA	NA	Danube (gelb)				
ID 86	Potential impact of river flooding on settlements	1961-1990; 2071-2100	NA		NA	NA	NA	NA	NA	NA	NA	NA	Danube (gelb)				
ID 87	Percentage change in arrivals/departures due to global warming	1995-2075	NA		NA	NA	NA	NA	NA	NA	NA	NA	Danube (rot)				
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	1900-2014	NA		NA	NA	NA	NA	NA	NA	NA	NA					

Overlap of time periods (9)

	Name	atrribute	ID 76	ID 77	ID 78	ID 79	ID 80	ID 81	ID 82	ID 83	ID 84	ID 85	ID 86	ID 87	ID 88	ID 89
ID 46	Projected changes in water-limited crop yield	2030-2050														
ID 47	Projection of ocean acidification	1850-2100														
ID 48	River floods (observation)	1998-2009														
ID 49	River flow	1962-2004														
ID 50	River flow (projected)	2071-2098														
ID 51	River flow drought (observations and projections)	1962-2004														
ID 52	Sea level change (observations)	NA														
ID 53	Sea level change (projections)	NA														
ID 54	Sea surface temperature (observations)	2002 - 2014														
ID 55	Simple daily intensity	NA														
ID 56	Snow cover (observations and projections)	1922-2013														
ID 57	Snow extent (observations)	1995-2012														
ID 58	Standardized SnowPack Index	2010–2014														
ID 59	Snow Water Equivalent	1979–2014														
ID 60	Storm surges	NA														
ID 61	Summer days	NA														
ID 62	The length of thermal growing season	1979-2013; 1950-2013														
ID 63	Total wet-day precipitation	NA														
ID 64	Tropical nights	NA														
ID 65	Very heavy precipitation days	NA														
ID 66	Very wet days	NA														
ID 67	Warm days	NA														
ID 68	Warm nights	NA														
ID 69	Warm spell duration index	NA														
ID 70	Water scarcity	NA														
ID 71	Water temperature (observations)	Rhine 1911-2010; Danube 1901-1998; Lake Vörtsjärv 1947-2011; Lake Saimaa 1924-2011														
ID 72	water temperature (projections)	2071-2100														
ID 73	Water-limited crop productivity (projections)	1961-1990, 2000, 2020, 2031-2060														
ID 74	Irrigation water requirement (observations and projections)	1975-2010														
ID 75	Ocean acidification (observations and projections)	1988-2012														
ID 76	Intensity of urban heat island with city size	2006-2008	2006-2008													
ID 77	Heating degree-days	1980-2010		1980-2010												
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA											
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA										
ID 80	Annual average damage from river floods	NA	NA	NA	NA	NA	NA									
ID 81	Average annual heat-related deaths per 100,000 habitats	2011 - 2040; 2017 - 2011			NA	NA	NA	2011 - 2040; 2017 - 2011								
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA							
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 84	Potential impact of river flooding on major roads	1961-1990; 2071-2100			NA	NA	NA		NA	NA	1961-1990; 2071-2100					
ID 85	Potential impact of river flooding on railways	1961-1990; 2071-2100			NA	NA	NA		NA	NA		1961-1990; 2071-2100				
ID 86	Potential impact of river flooding on settlements	1961-1990; 2071-2100			NA	NA	NA		NA	NA			1961-1990; 2071-2100			
ID 87	Percentage change in arrivals/departures due to global warming	1995-2075			NA	NA	NA		NA	NA				1995-2075		
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ID 89	Natural disasters	1900-2014			NA	NA	NA		NA	NA					NA	1900-2014

6. Overlap of spatial extent

The following overview shows the compatibility assessment concerning all indicators' overlap of spatial extent. The red numbers mark nine single sheets, which are presented in detail on the following pages.



Overlap of spatial extent (1)

	Name	atrribute	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13	ID 14	ID 15
ID 1	Arctic and Baltic Sea ice (observations / projections)	other	other														
ID 2	Bathing water quality	E	other	E													
ID 3	Chlorophyll in transitional, coastal and marine waters	E	other	E +E	E												
ID 4	Chlorophyll-a concentration (observations)	SE	other	SE + E	SE + E	SE											
ID 5	Climatic favourability of tree species (projections)	E	other	E +E	E +E	E + SE	E										
ID 6	Coastal flood damage and adaptation costs (projections)	G	other	G + E	G + E	G + SE	G + E	G									
ID 7	Cold days	NA	other	NA	NA	NA	NA	NA	NA								
ID 8	Cold nights	NA	other	NA	NA	NA	NA	NA	NA	NA							
ID 9	Cold spell duration index	NA	other	NA	NA	NA	NA	NA	NA	NA	NA						
ID 10	Consecutive dry days	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 11	Consecutive wet days	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
ID 12	Distribution of marine species	SE	other	SE + E	SE + E	SE + SE	SE + E	SE + G	NA	NA	NA	NA	NA	SE			
ID 13	Diurnal temperature range	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
ID 14	Extremely wet days	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ID 15	Floods and health (observations)	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E
ID 16	Freshwater biodiversity and water quality (observations)	other	other	other	other	other	other	other	NA	NA	NA	NA	NA	other	NA	NA	other
ID 17	Frost days	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 18	Glaciers (observations / projections)	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 19	Global and European Sea Level Rise (observations & projections)	G, E	other	G, E + E	G, E + E	G, E + SE	G, E + E	G, E + G	NA	NA	NA	NA	NA	G, E + SE	NA	NA	G, E + E
ID 20	Greenland ice sheet (observations)	SE	other	SE + E	SE + E	SE + SE	SE + E	SE + G	NA	NA	NA	NA	NA	SE + SE	NA	NA	SE + E
ID 21	Grow season length	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 22	Growing season for agriculture	other	other	other	other	other	other	other	NA	NA	NA	NA	NA	other	NA	NA	other
ID 23	Hazardous substances in marine organisms	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 24	heavy precipitation days	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 25	Ice days	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 26	Lake and river ice cover	other	other	other	other	other	other	other	NA	NA	NA	NA	NA	other	NA	NA	other
ID 27	Lake and river ice phenology (observed)	NH	other	NH + E	NH + E	NH + SE	NH + E	NH + G	NA	NA	NA	NA	NA	NH + SE	NA	NA	NH + E
ID 28	Lake Ice Extent (observations)	SE	other	SE + E	SE + E	SE + SE	SE + E	SE + G	NA	NA	NA	NA	NA	SE + SE	NA	NA	SE + E
ID 29	Land elevation below projected sea-level (observations)	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 30	Max 1 day precipitation	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 31	Max 5 day precipitation	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 32	Maximum of daily minimum temperature)	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 33	Maximum of daily maximum temperature)	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 34	Mean precipitation (observations and projections)	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 35	Minimum of daily minimum temperature	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 36	Minimum of daily maximum temperature	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 37	Moth Phenology Index (observations)	SE	other	SE + E	SE + E	SE + SE	SE + E	SE + G	NA	NA	NA	NA	NA	SE + SE	NA	NA	SE + E
ID 38	Number of wet days	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 39	Nutrients in transitional, coastal and marine waters	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 40	Observed development of ocean acidification	other	other	other	other	other	other	other	NA	NA	NA	NA	NA	other	NA	NA	other
ID 41	Ocean heat content (observations)	G	other	G + E	G + E	G + SE	G + E	G + G	NA	NA	NA	NA	NA	G + SE	NA	NA	G + E
ID 42	Permafrost (observations / projections)	NH, E	other	NH, E + E	NH, E + E	NH, E + SE	NH, E + E	NH, E + G	NA	NA	NA	NA	NA	NH, E + SE	NA	NA	NH, E + E
ID 43	Precipitation extremes (observations and projections)	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 44	Projected change in average annual and seasonal river flow	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 45	Projected change in river floods with a return period of 100 years	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E

Overlap of spatial extent (2)

	Name	atrribute	ID 16	ID 17	ID 18	ID 19	ID 20	ID 21	ID 22	ID 23	ID 24	ID 25	ID 26	ID 27	ID 28	ID 29	ID 30
ID 1	Arctic and Baltic Sea ice (observations / projections)	other															
ID 2	Bathing water quality	E															
ID 3	Chlorophyll in transitional, coastal and marine waters	E															
ID 4	Chlorophyll-a concentration (observations)	SE															
ID 5	Climatic favourability of tree species (projections)	E															
ID 6	Coastal flood damage and adaptation costs (projections)	G															
ID 7	Cold days	NA															
ID 8	Cold nights	NA															
ID 9	Cold spell duration index	NA															
ID 10	Consecutive dry days	NA															
ID 11	Consecutive wet days	NA															
ID 12	Distribution of marine species	SE															
ID 13	Diurnal temperature range	NA															
ID 14	Extremely wet days	NA															
ID 15	Floods and health (observations)	E															
ID 16	Freshwater biodiversity and water quality (observations)	other	other														
ID 17	Frost days	NA	other	NA													
ID 18	Glaciers (observations / projections)	E	other	NA	E												
ID 19	Global and European Sea Level Rise (observations & projections)	G, E	other	NA	G, E + E	G, E											
ID 20	Greenland ice sheet (observations)	SE	other	NA	SE + E	SE + G, E	SE										
ID 21	Grow season length	NA	other	NA	NA	NA	NA	NA									
ID 22	Growing season for agriculture	other	other	NA	other	other	other	NA	other								
ID 23	Hazardous substances in marine organisms	E	other	NA	E +E	E + G, E	E + SE	NA	other	E							
ID 24	heavy precipitation days	NA	other	NA	NA	NA	NA	NA	other	NA	NA						
ID 25	Ice days	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA					
ID 26	Lake and river ice cover	other	other	NA	other	other	other	NA	other	other	NA	NA	other				
ID 27	Lake and river ice phenology (observed)	NH	other	NA	NH + E	NH + G, E	NH + SE	NA	other	NH + E	NA	NA	other	NH			
ID 28	Lake Ice Extent (observations)	SE	other	NA	SE + E	SE + G, E	SE + SE	NA	other	SE + E	NA	NA	other	SE + NH	SE		
ID 29	Land elevation below projected sea-level (observations)	E	other	NA	E +E	E + G, E	E + SE	NA	other	E +E	NA	NA	other	E + NH	E + SE	E	
ID 30	Max 1 day precipitation	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 31	Max 5 day precipitation	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 32	Maximum of daily minimum temperature)	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 33	Maximum of daily maximum temperature)	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 34	Mean precipitation (observations and projections)	E	other	NA	E +E	E + G, E	E + SE	NA	other	E +E	NA	NA	other	E + NH	E + SE	E +E	NA
ID 35	Minimum of daily minimum temperature	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 36	Minimum of daily maximum temperature	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 37	Moth Phenology Index (observations)	SE	other	NA	SE + E	SE + G, E	SE + SE	NA	other	SE + E	NA	NA	other	SE + NH	SE + SE	SE + E	NA
ID 38	Number of wet days	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 39	Nutrients in transitional, coastal and marine waters	E	other	NA	E +E	E + G, E	E + SE	NA	other	E +E	NA	NA	other	E +NH	E + SE	E +E	NA
ID 40	Observed development of ocean acidification	other	other	NA	other	other	other	NA	other	other	NA	NA	other	other	other	other	NA
ID 41	Ocean heat content (observations)	G	other	NA	G + E	G + G, E	G + SE	NA	other	G + E	NA	NA	other	G + NH	G + SE	G + E	NA
ID 42	Permafrost (observations / projections)	NH, E	other	NA	NH, E + E	NH, E + G, E	NH, E + SE	NA	other	NH, E + E	NA	NA	other	NH, E + NH	NH, E + SE	NH, E + E	NA
ID 43	Precipitation extremes (observations and projections)	E	other	NA	E +E	E + G, E	E + SE	NA	other	E +E	NA	NA	other	E + NH	E + SE	E +E	NA
ID 44	Projected change in average annual and seasonal river flow	E	other	NA	E +E	E + G, E	E + SE	NA	other	E +E	NA	NA	other	E + NH	E + SE	E +E	NA
ID 45	Projected change in river floods with a return period of 100 years	E	other	NA	E +E	E + G, E	E + SE	NA	other	E +E	NA	NA	other	E + NH	E + SE	E +E	NA

Overlap of spatial extent (3)

	Name	atrribute	ID 31	ID 32	ID 33	ID 34	ID 35	ID 36	ID 37	ID 38	ID 39	ID 40	ID 41	ID 42	ID 43	ID 44	ID 45
ID 1	Arctic and Baltic Sea ice (observations / projections)	other															
ID 2	Bathing water quality	E															
ID 3	Chlorophyll in transitional, coastal and marine waters	E															
ID 4	Chlorophyll-a concentration (observations)	SE															
ID 5	Climatic favourability of tree species (projections)	E															
ID 6	Coastal flood damage and adaptation costs (projections)	G															
ID 7	Cold days	NA															
ID 8	Cold nights	NA															
ID 9	Cold spell duration index	NA															
ID 10	Consecutive dry days	NA															
ID 11	Consecutive wet days	NA															
ID 12	Distribution of marine species	SE															
ID 13	Diurnal temperature range	NA															
ID 14	Extremely wet days	NA															
ID 15	Floods and health (observations)	E															
ID 16	Freshwater biodiversity and water quality (observations)	other															
ID 17	Frost days	NA															
ID 18	Glaciers (observations / projections)	E															
ID 19	Global and European Sea Level Rise (observations & projections)	G, E															
ID 20	Greenland ice sheet (observations)	SE															
ID 21	Grow season length	NA															
ID 22	Growing season for agriculture	other															
ID 23	Hazardous substances in marine organisms	E															
ID 24	heavy precipitation days	NA															
ID 25	Ice days	NA															
ID 26	Lake and river ice cover	other															
ID 27	Lake and river ice phenology (observed)	NH															
ID 28	Lake Ice Extent (observations)	SE															
ID 29	Land elevation below projected sea-level (observations)	E															
ID 30	Max 1 day precipitation	NA															
ID 31	Max 5 day precipitation	NA	NA														
ID 32	Maximum of daily minimum temperature)	NA	NA	NA													
ID 33	Maximum of daily maximum temperature)	NA	NA	NA	NA												
ID 34	Mean precipitation (observations and projections)	E	NA	NA	NA	E											
ID 35	Minimum of daily minimum temperature	NA	NA	NA	NA	NA	NA										
ID 36	Minimum of daily maximum temperature	NA	NA	NA	NA	NA	NA	NA									
ID 37	Moth Phenology Index (observations)	SE	NA	NA	NA	SE + E	NA	NA	SE								
ID 38	Number of wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 39	Nutrients in transitional, coastal and marine waters	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E						
ID 40	Observed development of ocean acidification	other	NA	NA	NA	other	NA	NA	other	NA	other	other					
ID 41	Ocean heat content (observations)	G	NA	NA	NA	G + E	NA	NA	G + SE	NA	G + E	other	G				
ID 42	Permafrost (observations / projections)	NH, E	NA	NA	NA	NH, E + E	NA	NA	NH, E + SE	NA	NH, E + E	other	NH, E + G	NH, E			
ID 43	Precipitation extremes (observations and projections)	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E		
ID 44	Projected change in average annual and seasonal river flow	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E	
ID 45	Projected change in river floods with a return period of 100 years	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E

Overlap of spatial extent (4)

	Name	atrribute	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13	ID 14	ID 15
ID 46	Projected changes in water-limited crop yield	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 47	Projection of ocean acidification	other	other	other	other	other	other	other	NA	NA	NA	NA	NA	other	NA	NA	other
ID 48	River floods (observation)	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 49	River flow	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 50	River flow (projected)	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 51	River flow drought (observations and projections)	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 52	Sea level change (observations)	G, E, SE	other	G, E, SE + E	G, E, SE + E	SE + SE	G, E, SE + E	G, E, SE + G	NA	NA	NA	NA	NA	SE + SE	NA	NA	G, E, SE + E
ID 53	Sea level change (projections)	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	SE	other	SE + E	SE + E	SE + SE	SE + E	SE + G	NA	NA	NA	NA	NA	SE + SE	NA	NA	SE + E
ID 55	Simple daily intensity	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 56	Snow cover (observations and projections)	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 57	Snow extent (observations)	NH	other	NH + E	NH + E	NH + SE	NH + E	NH + G	NA	NA	NA	NA	NA	NH + SE	NA	NA	NH + E
ID 58	Standardized SnowPack Index	G	other	G + E	G + E	G + SE	G + E	G + G	NA	NA	NA	NA	NA	G + SE	NA	NA	G + E
ID 59	Snow Water Equivalent	NH	other	NH + E	NH + E	NH + SE	NH + E	NH + G	NA	NA	NA	NA	NA	NH + SE	NA	NA	NH + E
ID 60	Storm surges	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 61	Summer days	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	G, E	other	G, E + E	G, E + E	G, E + SE	G, E + E	G, E + G	NA	NA	NA	NA	NA	G, E + SE	NA	NA	G, E + E
ID 63	Total wet-day precipitation	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 71	Water temperature (observations)	SE	other	SE + E	SE + E	SE + SE	SE + E	SE + G	NA	NA	NA	NA	NA	SE + SE	NA	NA	SE + E
ID 72	water temperature (projections)	SE	other	SE + E	SE + E	SE + SE	SE + E	SE + G	NA	NA	NA	NA	NA	SE + SE	NA	NA	SE + E
ID 73	Water-limited crop productivity (projections)	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 74	Irrigation water requirement (observations and projections)	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 75	Ocean acidification (observations and projections)	other	other	other	other	other	other	other	NA	NA	NA	NA	NA	other	NA	NA	other
ID 76	Intensity of urban heat island with city size	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 77	Heating degree-days	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 78	Rainfall Deciles (observations)	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 81	Average annual heat-related deaths per 100,000 habitats	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 82	Growing Degree Days (observations and projections)	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 85	Potential impact of river flooding on railways	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 86	Potential impact of river flooding on settlements	E	other	E +E	E +E	E + SE	E +E	E + G	NA	NA	NA	NA	NA	E + SE	NA	NA	E +E
ID 87	Percentage change in arrivals/departures due to global warming	G	other	G + E	G + E	G + SE	G + E	G + G	NA	NA	NA	NA	NA	G + SE	NA	NA	G + E
ID 88	Annual olive-crop yield (observations)	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	G	other	G + E	G + E	G + SE	G + E	G + G	NA	NA	NA	NA	NA	G + SE	NA	NA	G + E

Overlap of spatial extent (5)

	Name	atrribute	ID 16	ID 17	ID 18	ID 19	ID 20	ID 21	ID 22	ID 23	ID 24	ID 25	ID 26	ID 27	ID 28	ID 29	ID 30
ID 46	Projected changes in water-limited crop yield	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 47	Projection of ocean acidification	other	other	NA	other	other	other	NA	other	other	NA	NA	other	other	other	other	NA
ID 48	River floods (observation)	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 49	River flow	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 50	River flow (projected)	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 51	River flow drought (observations and projections)	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 52	Sea level change (observations)	G, E, SE	other	NA	G, E, SE + E	G, E, SE + G	SE + SE	NA	other	G, E, SE + E	NA	NA	other	G, E, SE + NH	SE + SE	G, E, SE + E	NA
ID 53	Sea level change (projections)	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	SE	other	NA	SE + E	SE + G	SE + SE	NA	other	SE + E	NA	NA	other	SE + NH	SE + SE	SE + E	NA
ID 55	Simple daily intensity	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 56	Snow cover (observations and projections)	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 57	Snow extent (observations)	NH	other	NA	NH + E	NH + G, E	NH + SE	NA	other	NH + E	NA	NA	other	NH + NH	NH + SE	NH + E	NA
ID 58	Standardized SnowPack Index	G	other	NA	G + E	G + G G, E	G + SE	NA	other	G + E	NA	NA	other	G + NH	G + SE	G + E	NA
ID 59	Snow Water Equivalent	NH	other	NA	NH + E	NH + G, E	NH + SE	NA	other	NH + E	NA	NA	other	NH + NH	NH + SE	NH + E	NA
ID 60	Storm surges	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 61	Summer days	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 62	The length of thermal growing season	G, E	other	NA	G, E + E	G, E + G, E	G, E + SE	NA	other	G, E + E	NA	NA	other	G, E + NH	G, E + SE	G, E + E	NA
ID 63	Total wet-day precipitation	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 64	Tropical nights	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 66	Very wet days	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 67	Warm days	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 68	Warm nights	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 70	Water scarcity	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 71	Water temperature (observations)	SE	other	NA	SE + E	SE + G, E	SE + SE	NA	other	SE + E	NA	NA	other	SE + NH	SE + SE	SE + E	NA
ID 72	water temperature (projections)	SE	other	NA	SE + E	SE + G, E	SE + SE	NA	other	SE + E	NA	NA	other	SE + NH	SE + SE	SE + E	NA
ID 73	Water-limited crop productivity (projections)	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 74	Irrigation water requirement (observations and projections)	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 75	Ocean acidification (observations and projections)	other	other	NA	other	other	other	NA	other	other	NA	NA	other	other	other	other	NA
ID 76	Intensity of urban heat island with city size	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 77	Heating degree-days	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 78	Rainfall Deciles (observations)	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 80	Annual average damage from river floods	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 81	Average annual heat-related deaths per 100,000 habitats	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 82	Growing Degree Days (observations and projections)	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 85	Potential impact of river flooding on railways	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 86	Potential impact of river flooding on settlements	E	other	NA	E + E	E + G, E	E + SE	NA	other	E + E	NA	NA	other	E + NH	E + SE	E + E	NA
ID 87	Percentage change in arrivals/departures due to global warming	G	other	NA	G + E	G + G, E	G + SE	NA	other	G + E	NA	NA	other	G + NH	G + SE	G + E	NA
ID 88	Annual olive-crop yield (observations)	NA	other	NA	NA	NA	NA	NA	other	NA	NA	NA	other	NA	NA	NA	NA
ID 89	Natural disasters	G	other	NA	G + E	G + G, E	G + SE	NA		G + E	NA	NA	other	G + NH	G + SE	G + E	NA

Overlap of spatial extent (6)

	Name	atrribute	ID 31	ID 32	ID 33	ID 34	ID 35	ID 36	ID 37	ID 38	ID 39	ID 40	ID 41	ID 42	ID 43	ID 44	ID 45
ID 46	Projected changes in water-limited crop yield	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 47	Projection of ocean acidification	other	NA	NA	NA	other	NA	NA	other	NA	other	other	other	other	other	other	other
ID 48	River floods (observation)	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 49	River flow	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 50	River flow (projected)	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 51	River flow drought (observations and projections)	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 52	Sea level change (observations)	G, E, SE	NA	NA	NA	~~G, E, SE + E~~	NA	NA	SE + SE	NA	~~G, E, SE + E~~	other	~~G, E, SE + G~~	~~G, E, SE + NH, E~~	~~G, E, SE + E~~	~~G, E, SE + E~~	~~G, E, SE + E~~
ID 53	Sea level change (projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 54	Sea surface temperature (observations)	SE	NA	NA	NA	SE + E	NA	NA	SE + SE	NA	SE + E	other	SE + G	SE + NH, E	SE + E	SE + E	SE + E
ID 55	Simple daily intensity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 56	Snow cover (observations and projections)	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 57	Snow extent (observations)	NH	NA	NA	NA	NH + E	NA	NA	NH + SE	NA	NH + E	other	NH + G	NH + NH, E	NH + E	NH + E	NH + E
ID 58	Standardized SnowPack Index	G	NA	NA	NA	G + E	NA	NA	G + SE	NA	G + E	other	G + G	G + NH, E	G + E	G + E	G + E
ID 59	Snow Water Equivalent	NH	NA	NA	NA	NH + E	NA	NA	NH + SE	NA	NH + E	other	NH + G	NH + NH, E	NH + E	NH + E	NH + E
ID 60	Storm surges	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 61	Summer days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	G, E	NA	NA	NA	G, E + E	NA	NA	G, E + SE	NA	G, E + E	other	G, E + G	G, E + NH, E	G, E + E	G, E + E	G, E + E
ID 63	Total wet-day precipitation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 70	Water scarcity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 71	Water temperature (observations)	SE	NA	NA	NA	SE + E	NA	NA	SE + SE	NA	SE + E	other	SE + G	SE + NH, E	SE + E	SE + E	SE + E
ID 72	water temperature (projections)	SE	NA	NA	NA	SE + E	NA	NA	SE + SE	NA	SE + E	other	SE + G	SE + NH, E	SE + E	SE + E	SE + E
ID 73	Water-limited crop productivity (projections)	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 74	Irrigation water requirement (observations and projections)	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 75	Ocean acidification (observations and projections)	other	NA	NA	NA	other	NA	NA	other	NA	other	other	other	other	other	other	other
ID 76	Intensity of urban heat island with city size	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 77	Heating degree-days	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 81	Average annual heat-related deaths per 100,000 habitats	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 85	Potential impact of river flooding on railways	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 86	Potential impact of river flooding on settlements	E	NA	NA	NA	E +E	NA	NA	E + SE	NA	E +E	other	E + G	E + NH, E	E +E	E +E	E +E
ID 87	Percentage change in arrivals/departures due to global warming	G	NA	NA	NA	G + E	NA	NA	G + SE	NA	G + E	other	G + G	G + NH, E	G + E	G + E	G + E
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	NA	NA	NA	NA	NA
ID 89	Natural disasters	G	NA	NA	NA	G + E	NA	NA	G + SE	NA	G + E	other	G + G	G + NH, E	G + E	G + E	G + E

Overlap of spatial extent (7)

	Name	atrribute	ID 46	ID 47	ID 48	ID 49	ID 50	ID 51	ID 52	ID 53	ID 54	ID 55	ID 56	ID 57	ID 58	ID 59	ID 60
ID 46	Projected changes in water-limited crop yield	E	E														
ID 47	Projection of ocean acidification	other	other	other													
ID 48	River floods (observation)	E	E + E	other	E												
ID 49	River flow	E	E + E	other	E + E	E											
ID 50	River flow (projected)	E	E + E	other	E + E	E + E	E										
ID 51	River flow drought (observations and projections)	E	E + E	other	E + E	E + E	E + E	E									
ID 52	Sea level change (observations)	G, E, SE	G, E, SE + E	other	G, E, SE + E	G, E, SE + E	G, E, SE + E	G, E, SE + E	G, E, SE								
ID 53	Sea level change (projections)	NA	NA	other	NA	NA	NA	NA	NA	NA							
ID 54	Sea surface temperature (observations)	SE	SE + E	other	SE + E	SE + E	SE + E	SE + E	SE + SE	NA	SE						
ID 55	Simple daily intensity	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA					
ID 56	Snow cover (observations and projections)	E	E + E	other	E + E	E + E	E + E	E + E	E + G, E, SE	NA	E + SE	NA	E				
ID 57	Snow extent (observations)	NH	NH + E	other	NH + E	NH + E	NH + E	NH + E	NH + G, E, SE	NA	NH + SE	NA	NH + E	NH			
ID 58	Standardized SnowPack Index	G	G + E	other	G + E	G + E	G + E	G + E	G + G, E, SE	NA	G + SE	NA	G + E	G + NH	NA		
ID 59	Snow Water Equivalent	NH	NH + E	other	NH + E	NH + E	NH + E	NH + E	NH + G, E, SE	NA	NH + SE	NA	NH + E	NH + NH	NA	NA	
ID 60	Storm surges	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	G, E
ID 61	Summer days	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 62	The length of thermal growing season	G, E	G, E + E	other	G, E + E	G, E + E	G, E + E	G, E + E	G, E + G, E, SE	NA	G, E + SE	NA	G, E + E	G, E + NH	NA	NA	G, E + G, E
ID 63	Total wet-day precipitation	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 64	Tropical nights	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 65	Very heavy precipitation days	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 66	Very wet days	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 67	Warm days	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 68	Warm nights	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 69	Warm spell duration index	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 70	Water scarcity	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 71	Water temperature (observations)	SE	SE + E	other	SE + E	SE + E	SE + E	SE + E	SE + SE	NA	SE + SE	NA	SE + E	SE + NH	NA	NA	SE + G, E
ID 72	water temperature (projections)	SE	SE + E	other	SE + E	SE + E	SE + E	SE + E	SE + SE	NA	SE + SE	NA	SE + E	SE + NH	NA	NA	SE + G, E
ID 73	Water-limited crop productivity (projections)	E	E + E	other	E + E	E + E	E + E	E + E	E + G, E, SE	NA	E + SE	NA	E + E	E + NH	NA	NA	E + G, E
ID 74	Irrigation water requirement (observations and projections)	E	E + E	other	E + E	E + E	E + E	E + E	E + G, E, SE	NA	E + SE	NA	E + E	E + NH	NA	NA	E + G, E
ID 75	Ocean acidification (observations and projections)	other	other	other	other	other	other	other	other	NA	other	NA	other	other	NA	NA	other
ID 76	Intensity of urban heat island with city size	E	E + E	other	E + E	E + E	E + E	E + E	E + G, E, SE	NA	E + SE	NA	E + E	E + NH	NA	NA	E + G, E
ID 77	Heating degree-days	E	E + E	other	E + E	E + E	E + E	E + E	E + G, E, SE	NA	E + SE	NA	E + E	E + NH	NA	NA	E + G, E
ID 78	Rainfall Deciles (observations)	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 80	Annual average damage from river floods	E	E + E	other	E + E	E + E	E + E	E + E	E + G, E, SE	NA	E + SE	NA	E + E	E + NH	NA	NA	E + G, E
ID 81	Average annual heat-related deaths per 100,000 habitats	E	E + E	other	E + E	E + E	E + E	E + E	E + G, E, SE	NA	E + SE	NA	E + E	E + NH	NA	NA	E + G, E
ID 82	Growing Degree Days (observations and projections)	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 83	Chilling Units (observations)	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 84	Potential impact of river flooding on major roads	E	E + E	other	E + E	E + E	E + E	E + E	E + G, E, SE	NA	E + SE	NA	E + E	E + NH	NA	NA	E + G, E
ID 85	Potential impact of river flooding on railways	E	E + E	other	E + E	E + E	E + E	E + E	E + G, E, SE	NA	E + SE	NA	E + E	E + NH	NA	NA	E + G, E
ID 86	Potential impact of river flooding on settlements	E	E + E	other	E + E	E + E	E + E	E + E	E + G, E, SE	NA	E + SE	NA	E + E	E + NH	NA	NA	E + G, E
ID 87	Percentage change in arrivals/departures due to global warming	G	G + E	other	G + E	G + E	G + E	G + E	G + G, E, SE	NA	G + SE	NA	G + E	G + NH	NA	NA	G + G, E
ID 88	Annual olive-crop yield (observations)	NA	NA	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ID 89	Natural disasters	G	G + E	other	G + E	G + E	G + E	G + E	G + G, E, SE	NA	G + SE	NA	G + E	G + NH	NA	NA	G + G, E

Overlap of spatial extent (8)

	Name	atrribute	ID 61	ID 62	ID 63	ID 64	ID 65	ID 66	ID 67	ID 68	ID 69	ID 70	ID 71	ID 72	ID 73	ID 74	ID 75
ID 46	Projected changes in water-limited crop yield	E															
ID 47	Projection of ocean acidification	other															
ID 48	River floods (observation)	E															
ID 49	River flow	E															
ID 50	River flow (projected)	E															
ID 51	River flow drought (observations and projections)	E															
ID 52	Sea level change (observations)	G, E, SE															
ID 53	Sea level change (projections)	NA															
ID 54	Sea surface temperature (observations)	SE															
ID 55	Simple daily intensity	NA															
ID 56	Snow cover (observations and projections)	E															
ID 57	Snow extent (observations)	NH															
ID 58	Standardized SnowPack Index	G															
ID 59	Snow Water Equivalent	NH															
ID 60	Storm surges	NA															
ID 61	Summer days	NA	NA														
ID 62	The length of thermal growing season	G, E	NA	NA													
ID 63	Total wet-day precipitation	NA	NA	NA	NA												
ID 64	Tropical nights	NA	NA	NA	NA	NA											
ID 65	Very heavy precipitation days	NA	NA	NA	NA	NA	NA										
ID 66	Very wet days	NA	NA	NA	NA	NA	NA	NA									
ID 67	Warm days	NA	NA	NA	NA	NA	NA	NA	NA								
ID 68	Warm nights	NA	NA	NA	NA	NA	NA	NA	NA	NA							
ID 69	Warm spell duration index	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 70	Water scarcity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
ID 71	Water temperature (observations)	SE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	SE				
ID 72	water temperature (projections)	SE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	SE + SE	SE			
ID 73	Water-limited crop productivity (projections)	E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	E + SE	E + SE	E		
ID 74	Irrigation water requirement (observations and projections)	E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	E + SE	E + SE	E +E	E	
ID 75	Ocean acidification (observations and projections)	other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other	other	other	other	other
ID 76	Intensity of urban heat island with city size	E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	E + SE	E + SE	E +E	E +E	other
ID 77	Heating degree-days	E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	E + SE	E + SE	E +E	E +E	other
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other
ID 80	Annual average damage from river floods	E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	E + SE	E + SE	E +E	E +E	other
ID 81	Average annual heat-related deaths per 100,000 habitats	E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	E + SE	E + SE	E +E	E +E	other
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other
ID 84	Potential impact of river flooding on major roads	E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	E + SE	E + SE	E +E	E +E	other
ID 85	Potential impact of river flooding on railways	E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	E + SE	E + SE	E +E	E +E	other
ID 86	Potential impact of river flooding on settlements	E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	E + SE	E + SE	E +E	E +E	other
ID 87	Percentage change in arrivals/departures due to global warming	G	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	G + SE	G + SE	G + E	G + E	other
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	other
ID 89	Natural disasters	G	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	G + SE	G + SE	G + E	G + E	other

Overlap of spatial extent (9)

	Name	atrribute	ID 76	ID 77	ID 78	ID 79	ID 80	ID 81	ID 82	ID 83	ID 84	ID 85	ID 86	ID 87	ID 88	ID 89
ID 46	Projected changes in water-limited crop yield	E														
ID 47	Projection of ocean acidification	other														
ID 48	River floods (observation)	E														
ID 49	River flow	E														
ID 50	River flow (projected)	E														
ID 51	River flow drought (observations and projections)	E														
ID 52	Sea level change (observations)	G, E, SE														
ID 53	Sea level change (projections)	NA														
ID 54	Sea surface temperature (observations)	SE														
ID 55	Simple daily intensity	NA														
ID 56	Snow cover (observations and projections)	E														
ID 57	Snow extent (observations)	NH														
ID 58	Standardized SnowPack Index	G														
ID 59	Snow Water Equivalent	NH														
ID 60	Storm surges	NA														
ID 61	Summer days	NA														
ID 62	The length of thermal growing season	G, E														
ID 63	Total wet-day precipitation	NA														
ID 64	Tropical nights	NA														
ID 65	Very heavy precipitation days	NA														
ID 66	Very wet days	NA														
ID 67	Warm days	NA														
ID 68	Warm nights	NA														
ID 69	Warm spell duration index	NA														
ID 70	Water scarcity	NA														
ID 71	Water temperature (observations)	SE														
ID 72	water temperature (projections)	SE														
ID 73	Water-limited crop productivity (projections)	E														
ID 74	Irrigation water requirement (observations and projections)	E														
ID 75	Ocean acidification (observations and projections)	other														
ID 76	Intensity of urban heat island with city size	E	E													
ID 77	Heating degree-days	E	E +E	E												
ID 78	Rainfall Deciles (observations)	NA	NA	NA	NA											
ID 79	Reconnaissance Drought Index (observations, climate scenarios)	NA	NA	NA	NA	NA										
ID 80	Annual average damage from river floods	E	E +E	E +E	NA	NA	E									
ID 81	Average annual heat-related deaths per 100,000 habitats	E	E +E	E +E	NA	NA	E +E	E								
ID 82	Growing Degree Days (observations and projections)	NA	NA	NA	NA	NA	NA	NA	NA							
ID 83	Chilling Units (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA						
ID 84	Potential impact of river flooding on major roads	E	E +E	E +E	NA	NA	E +E	E +E	NA	NA	E					
ID 85	Potential impact of river flooding on railways	E	E +E	E +E	NA	NA	E +E	E +E	NA	NA	E +E	E				
ID 86	Potential impact of river flooding on settlements	E	E +E	E +E	NA	NA	E +E	E +E	NA	NA	E +E	E +E	E			
ID 87	Percentage change in arrivals/departures due to global warming	G	G + E	G + E	NA	NA	G + E	G + E	NA	NA	G + E	G + E	G + E	G		
ID 88	Annual olive-crop yield (observations)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ID 89	Natural disasters	G	G + E	G + E	NA	NA	G + E	G + E	NA	NA	G + E	G + E	G + E	G + G	NA	G

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