



# Stakeholder Forum

FOR A SUSTAINABLE FUTURE

## Healthier Planet - Healthier Lives

An analysis of the connections between environment and health-related targets in the Sustainable Development Goals and the 2030 Agenda

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## 1. Introduction

The Ministerial Policy-Review Session of the United Nations Environment Assembly, UNEA-2, taking this year in Nairobi in May, will gather under the theme “Healthy People, Healthy Environment”. At this session, ministers and other high-level participants will be seeking to identify concrete partnerships, policies and tools in the environmental field that can help to achieve the global health targets identified in Sustainable Development Goal (SDG) 3 and in other related SDGs.

In order to inform that discussion the United Nations Environment Programme (UNEP) have commissioned a Global Thematic Report on “Healthy People, Healthy Environment” which will address the nexus between environmental health and public health in light of the 2030 Agenda. The report will be launched at the UNEA-2 meeting in May.

In order to contribute further to this discussion Stakeholder Forum have undertaken a separate preliminary analysis of the SDG targets that have an environmental dimension in order to identify which of these may have the most significant results in terms of public health improvement. The results of this analysis have then been applied to review the draft resolutions to be considered at UNEA-2 and to identify some points on which they might usefully be strengthened.

This analysis has been undertaken by Anna Coopman of Stakeholder Forum with assistance from Derek Osborn as part of a programme of work undertaken for UNEP in preparation for UNEA-2. It has been circulated in draft amongst a number of expert stakeholders and has benefitted from some comments from them.

It is hoped this report may assist the Ministerial review in its task of shaping priorities for UNEP action within the environment-health nexus, and help policy-makers form effective, integrated SDG implementation strategies going forward.



## 2. Methodology

The methodology used in this study is a simplified version of that which a team of experts produced and applied in a recent report about linkages between SDG targets.<sup>1</sup> Whilst the previous report explored interlinkage types in depth between Goal 12 on Sustainable Consumption and Production, the present study serves as a top-level review of links between health and environment-related targets in the SDG set.

### a. Selection

The study considered targets within the overall total of 169 SDG set, and identified links between those targets that are related to health and those that are related to the environment.

The analysis concentrated on those environment and health-related targets that have close connections to each other so as to show the most important links between the two themes. Target 3.1 on reducing the maternal mortality rate, for example is less closely linked with an environmental target than 3.9 on reducing deaths caused by air, water and soil pollution, and therefore does not appear in the table.

The methodology groups both health-related and environmental targets into six distinct clusters, which simplifies the analysis and ensures the avoidance of repetition.

The six health-related clusters are:

1. Eliminating food scarcity and hunger
2. Eliminating or minimising causes of communicable disease
3. Improving mental health and well-being
4. Reduce adverse health impacts from chemicals, waste and pollution
5. Securing universal access to clean water
6. Reduce disaster-related deaths

The six environmental clusters are:

- A. Sustainable management of agriculture and food production systems
- B. Improve resilience against disaster
- C. Sustainable management of industrial processes, chemicals, wastes and emissions
- D. Sustainable management of water systems.
- E. Sustainable management of green spaces
- F. Sustainable fishing policies

The majority of umbrella topics cover one target only, however others encompass two, and

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<sup>1</sup> 'Seeing the Whole: Implementing the SDGs in an Integrated and Coherent Way.' A Research Pilot by Stakeholder Forum, Bioregional and Newcastle University. 2016.  
<http://www.stakeholderforum.org/sf/index.php/our-publications-sp-1224407103/reports-in-our-publications/625-seeing-the-whole-implementing-the-sdgs-in-the-an-integrated-and-coherent-way>

up to five for 'Improve quality of air, soil, water, land through enhanced management of hazardous chemicals and wastes'. The targets covered by each umbrella topic are listed in Table 2 below.

***b. Identifying links***

Looking at the six clusters of environmental targets and the six clusters of health related targets, we then identified where links existed between them.

***c. Defining interlinkage type***

The final part of the methodology involved identifying the type of link that exists between the health and environment clusters, in situations where a link had been found. We used a simplified version of the methodology used in our previous report, including only the 'Enabling' interlinkages.<sup>2</sup>

Within the 'Enabling' category, we have applied the types Direct Enabling, Indirect Enabling, and Disabling. The definitions are explained in Table 1 below.

The direction of enabling is always from the environmental target to the health target, as we are only considering the enabling impact of environmental factors on health issues. The Conclusion section below does include a brief analysis however of the impact of health targets on environmental targets.

<b>Table 1 - Assessment Methodology Classification of Type and Nature of Interlinkages</b>	
<b>Type</b>	<b>Type Definition</b>
<b>Disabling</b>	Implementing the environmental target may hinder or reverse the achievement of the health target.
<b>Indirect Enabling</b>	The implementation of the environment indirectly enables the achievement of the health target; there are other factors required to ensure the health target's full achievement.
<b>Direct Enabling</b>	The environmental target's implementation directly enables the achievement of the health target; the environmental target is a significant factor in achieving the health target.

In addition to a definition, we have explained the reasons behind this definition in the table. Please refer to Table 2 below.

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<sup>2</sup> The reason for choosing a narrower set of interlinkages was due to the more specific set of targets under scrutiny in this study. Whilst in the previous report 'Relying' and 'Supporting' interlinkages arose in links between SCP targets and other targets from any other goal in the SDG set, the current focus between two particular themes made these two relationships less common. Additionally, the depth of examination differs in either report, and the higher level analysis in this case lends itself to a smaller number of definitions.

### 3. Results

**Table 2 - Results**  
**Identification of Health/Environment Linkages between SDG targets**

Environment theme and targets across:  Health theme and targets below:	Sustainable management of agriculture and food production systems 2.3, first part of 2.4, 12.3	Improve resilience against disaster 2.4	Sustainable management of industrial processes, chemicals, wastes and emissions 6.3, 11.6, 12.4, 14.1, 15.8	Sustainable management of water systems 6.4	Sustainable management of green spaces 11.7	Sustainable fishing policies 14.4, 14.6
<b>Eliminating food scarcity and hunger</b> 2.1, 2.2	<b>Indirect enabling:</b> Other factors are involved which could influence the availability of food to people, such as corruption, land tenure, education, or pricing out local populations by exporting produce to wealthy nations.	<b>Direct enabling:</b> Implementing resilient agricultural practices will have an immediate impact on the likelihood of reducing hunger in times of disaster for poor people or those in vulnerable situations.		<b>Indirect enabling:</b> Effectively managing water supply used for agriculture could impact food availability, thereby reducing hunger. Other factors such as education and weather would affect water supplies.		<b>Direct enabling:</b> Preventing overfishing will stabilise fisheries, which will provide more secure food resources in the future. N.B. In the short term: Disabling: reducing fisheries' output could initially have a negative impact on people's access to food.
<b>Eliminating or minimising causes of communicable disease</b> 3.3			<b>Indirect enabling:</b> Preventing the travel of water-borne and other communicable diseases may be a secondary effect of improved management of water, soil and air.	<b>Indirect enabling:</b> Water scarcity could lead to poor sanitation, which may contribute to the transfer of communicable diseases.		
<b>Improving mental health and well-being and reduce non-communicable diseases</b> 3.4				<b>Indirect enabling:</b> As above - water scarcity could lead to poorer sanitation and increase the likelihood of developing a non-communicable disease.	<b>Indirect enabling:</b> Other policies including mainstreaming mental health into public health policy will be important, in addition to improving public spaces.	

Reduce adverse health impacts from chemicals, waste and pollution 3.9			<b>Direct enabling:</b> Better management of chemicals, wastes and polluting emissions would significantly improve public health.			
Securing universal access to clean water 6.1			<b>Direct enabling:</b> Eliminating pollution of water will impact the accessibility of safe water to all.	<b>Direct enabling:</b> Sustainable management of water supplies will help to achieve universal access to water.		
Reduce disaster-related deaths 11.5		<b>Direct enabling:</b> Improving agricultural resilience against disaster would help to reduce disaster-related deaths.	<b>Direct enabling:</b> Improving management of chemicals could prevent disasters like water-related disasters, which in turn would help to prevent disaster-related deaths.	<b>Direct enabling:</b> Improving management of water supply could prevent water-related disasters.		

#### 4. Analysis

The achievement of the SDG health targets cited above would be significantly assisted by addressing the environmental targets identified in the table. This provides a strong reason for giving special attention to this group of environmental targets.

- **We have identified 14 cases where meeting environment-related targets in the SDG set would help to achieve health targets.** For example:
  - Sustainable management of water supplies could help to achieve universal access to water;
  - Improved management of water could be a major factor in decreasing communicable diseases;
  - Improved management of chemicals and pollutants in air, water and soil would reduce adverse health impacts;
  - Better planning and management of urban areas including increased access to green public spaces would contribute to improving mental health;
  - Reducing overfishing would lead to more sustainable yields and help to reduce hunger and malnutrition;
  - Improving the sustainability of agricultural practices would make it more resilient and better adapted to coping with natural disasters.
  
- **Some environmental targets can help to achieve the health targets directly, whereas other environmental targets can do so indirectly.** The table demonstrates that 8/14 links are direct whilst 6/14 are indirect. The links which have a direct enabling relationship are particularly important because acting on these will

have the double benefit of securing both environmental and public health gains. For example, improving resilience against disaster would additionally help to reduce disaster-related deaths. Indirect links between environment and health targets are also significant, but further factors are required to contribute to the achievement of the health targets, in addition to environment-related ones. This means an integrated approach must be taken so that environmental and other relevant factors, such as corruption, education and governance, are dealt with together, to ensure public health issues can be resolved.

- **Environmental targets negatively influence the achievement of a health target in at least one case: sustainable fishing policies.** If illegal fishing practices are eliminated, this may cut off the food supply of some individuals in the short term. Regulators would have to ensure that sustainable fishing policies enable adequate food supplies to all people in the longer term.
- **The most interlinked environmental factor is water, followed by chemicals.** Sustainable management of water demonstrates five instances of linkage with health targets, showing it to be one of the most important environmental factors in alleviating public health problems. Most of its relations with health targets however are indirect links, so many other factors would be needed to deal with its related health problems. Sustainable management of industrial processes, chemicals and toxic wastes links in four cases with health targets, showing it to be the second most related environmental theme with health matters. The majority of these links are direct, meaning that managing toxic wastes would have a significant impact on the associated health matters, including securing universal access to clean water and reducing the causes of communicable diseases.
- **The most interlinked health theme is hunger, followed by disaster-related deaths.** Eliminating food scarcity and hunger is a health concern that is widely interlinked with environmental matters. This means that several environmental policies, including sustainable management of water and agriculture, are required to combat this issue effectively, which presents policy-making on this theme with a greater challenge. Reducing disaster-related deaths is also broadly linked with environmental targets, demonstrating that it too has multiple causes, and policies will need to take all these into account to effectively combat the issue.
- **We must not forget the importance of social and economic targets, which are key in achieving many health and environmental targets.** These are partly referenced in our study by recognising the existence of other factors in indirect relationships between targets. However a further study could identify links between health and environment targets with social or economic targets within the SDG set.
- **Nor must we forget the impact of health targets on the achievement of environmental targets.** Even though this study focussed on the impact of environmental targets on health targets, it should be noted that the achievement of the health targets in the table above would also have a positive impact on the

environmental targets, not least because healthier populations will have more capacity and resources to attend to environmental problems.

**Policy recommendations:**

- ❖ Policy-makers should focus on particular environmental targets to amplify their impact and improve health goals in addition. Focussing on sustainable water supplies and the sustainable management of chemicals would have the widest effect on health issues.
- ❖ Policy-makers need to consider additional targets when aiming to extend the impact of environmental targets which indirectly enable health targets.
- ❖ The broader health of the environment has wide-ranging impacts, not demonstrable in the above table, as the entire world's ecosystem is interconnected. Policies should always be integrated and consider both the effects on environmental health and human health.

## 5. Application to UNEA-2 Draft Resolutions

In this section we examine the UNEA-2 draft resolutions' coverage of the interlinked environment and health targets identified above. This year's Global Thematic Report "Healthy Environment, Healthy People" makes broad policy recommendations concerning health and environmental links, but we would expect to see some of this year's 26 resolutions deliver those environmental targets that could impact public health. The resolutions cover the health and environment targets, and the links between them, to a certain extent, but do not cover them exhaustively. We have examined the linkages' inclusion into the March 2016 version of the draft resolutions under the six cluster headings used above.

### *Eliminating food scarcity and hunger*

This aim is referred to in the resolution on **Prevention, reduction and reuse of food waste and losses**. The resolution proposes the implementation of programs and market based solutions, with partners and stakeholders, to reduce food waste, and thereby increase the availability of nutritious and healthy food for human consumption, especially to the most food insecure populations. This approach relates to the first environmental theme identified above, sustainable management of food production systems and agriculture, and is an apt policy to target food scarcity and hunger. There are no further resolutions that aim to increase agricultural productivity, however, in order to end hunger and malnutrition. In this way the resolutions only cover a small part of this linkage.

Ending hunger is also addressed in the resolution on the **Protection of the environment in areas affected by armed conflict**, since the preamble expresses concern that the conflict in Gaza is having a negative impact on the Palestinian population's public health, including access to safe food and natural resources. The resolution requests UNEP to deploy a mission of environmental experts to conduct an environmental impact assessment including

to assess the impacts of the hostilities on human health. This policy relates to the environmental category improving resilience against disaster, which links to eliminating hunger and food scarcity, according to the table above. There is no other evidence of resolutions including aims to improve agricultural resilience, apart from those related to climate resilience, which are referred to in the paragraph below on 'Disaster-related deaths'.

The sustainable management of water supplies and its relation to food availability is not well addressed in the resolutions. It could only be said to be dealt with broadly by **The International Environment Forum for Basin Organizations**, which encourages universal access to safe water by improving water governance. **Sustainable management of natural capital** could refer to sustainable management of water, but water is not specified in the resolution and its purpose seems as much as for sustainable development as for economic development.

The sustainable management of fisheries, another environmental policy linked to hunger, is referred to in two resolutions, including **Oceans and Seas** and **Sustainable management of Natural Capital for sustainable development and poverty eradication**, where it mentions its potential impact on food security, and proposes policies to promote valuing natural capital in national accounts, which may lead to fisheries' sustainable management. In **Oceans and Seas**, the resolution requests UNEP to develop a sustainable fisheries industry through its Regional Seas Programme. In this way, the link is dealt with well by the resolutions.

Each linkage between the cluster on Eliminating food scarcity and hunger is dealt with in part, but the resolutions could cover the links more thoroughly, for example by including one that encourages increased agricultural productivity.

### ***Eliminating or minimising causes of communicable disease***

Communicable diseases are not referred to specifically in these resolutions, however some proposals may incidentally increase the likelihood of prevention, by enhancing water governance through the International Forum for Basin Organisations, for example, or reducing threats to health and wellbeing in Gaza with an environmental impact assessment.

Using **Environmentally sound technologies in relation to waste management** and other similar resolutions may have an indirectly positive effect on the quality of water, soil or air, which may help to eliminate the spread of communicable diseases.

As both the relevant environment and health links in this category exhibit indirect relationships, this level of coverage by the UNEA resolutions is to be expected.



### ***Improving mental health and well-being and reducing non-communicable diseases***

The resolution **Sustainable and optimal management of natural capital; for sustainable development and poverty eradication** encourages the protection of natural resources as well as promoting natural capital accounting in developing countries. It invites the Executive Director to develop or strengthen partnerships to raise awareness, improve appreciation of natural capital approaches, and the contribution of natural capital to the sustainable development of countries and well-being of their populations. It also invites the Executive Director to support countries in promoting actions related to the protection of natural resources. This could help to increase green spaces, which could contribute to the alleviation of mental health issues. It is possible, though, that protecting natural resources may conflict with other points in this resolution, such as the proposal to harness natural capital to increase economic development.

Other than this, the resolution **Integration of Biodiversity for Well-being** refers briefly to improving well-being through implementing the 2030 Agenda for Sustainable Development in an integrated way.

Therefore, although there are references to protecting some natural environments, and managing natural resources sustainably throughout the resolutions, there is no specific resolution on increasing access to public green spaces.

The resolution **Sand and dust Storms** addresses the reduction of non-communicable diseases through intensifying monitoring, data collection and knowledge sharing on the impacts on human health and well-being of sand and dust storms. This is a very specific application surrounding the elimination non-communicable diseases, however. Improved management of water supply through **The International Environment Forum for Basin Organizations** resolution could help to reduce non-communicable diseases if increased water availability encourages higher sanitation in these areas.

### ***Reduce adverse health impacts from chemicals, waste and pollution***

This cluster features strongly in this year's set of resolutions. The resolutions **Marine plastic debris and microplastics**, **Promoting Environmentally-Sound Lead Battery Recycling and Environmentally Sound Technologies in relation to waste management**, all propose ways to reduce the impacts of the chemicals on public health.

The former resolution underlines that more research is needed on marine plastic debris and microplastics, including associated chemicals, and especially on environmental and social, including human health impacts. The second strongly encourages member states to adopt laws and regulations to ensure that an adequate supply of lead batteries are directed to highly efficient, large-scale plants with appropriate pollution controls. The latter resolution includes a sentence encouraging the Executive Director to provide further guidance materials and capacity building to reduce the health and environmental impacts associated with wastes' indiscriminate disposal, however this may be deleted in the final resolution.

A notable absence is any reference to the growing problems of air pollution in many parts of the world and the ill health and premature deaths this causes. Causes range from unsatisfactory domestic heating and cooking arrangements in some countries, and massive coal-burning or excessive emissions from vehicles in others. The time could be ripe for UNEA to spearhead a new global drive to tackle these issues more effectively and comprehensively.

### ***Securing universal access to clean water***

The resolution on **The International Environment Forum for Basin Organizations** encourages universal access to safe water by improving water governance. It does so through requesting a second meeting of the International Environment Forum for Basin Organizations, which will work to improve transboundary cooperation and increase water security and universal access. This may help to improve sustainable water supplies, which could lead to universal access to water. But as we identified that Sustainable management of water is the most interlinked environmental matter with health issues, we might expect a stronger focus on this topic within other resolutions.

Carrying out more research to eliminate marine plastics under the resolution **Marine plastic debris and microplastics** could also help to increase the availability of safe drinking water. The more general **Sustainable management of chemicals and waste** would also help to improve the quality of water, if the many processes suggested in the resolution are taken up.

The resolutions could do more to ensure improved infrastructure delivers water to those who currently do not have access, however.

## ***Reduce disaster-related deaths***

Apart from the resolution on the Gaza conflict, this topic is not well addressed in the resolutions. The impact of dust storms is covered if these equate to a disaster. The resolution **Protection of the environment in areas affected by armed conflict** deals with disaster-related deaths by requesting an environmental impact assessment of the conflict in Gaza, however this is a very specific application of the theme.

The resolution on the Paris Agreement **Promoting the effective implementation of the Paris Climate Agreement** encourages climate resilience, although does not refer to agricultural resilience in particular. The proposals to continue the effective implementation of the agreement would contribute to preventing disaster-related deaths caused by climate change.

The resolutions are lacking in content around water supply and quality during disaster situations, which we identified are important in preventing disaster-related deaths.



## **6. Conclusions**

Some of the analysis of environment/health linkages in the total SDG set which is presented in this report underlines the crucial importance of some familiar topics in the field of environmental health, including:

- Universal Access to Clean water for public health and the good management of water resources to secure this;
- Sustainable management of agriculture and food production so as to ensure healthy food and longer term resilience of the food production cycle, including against disasters;
- Sustainable management of oceans and fishing policies to ensure quantity and sustainability of fish supplies;
- Good management of industrial processes, chemical and waste so as to reduce harmful environmental and health impacts.

Other linkages identified may be rather less familiar and thus deserve new attention and policy initiatives in the context of implementing the SDGs. The importance of good urban environments to mental health is one such theme.

Our analysis also revealed the nature of the connections between environment and health issues, as well as exposing which environmental issues were the most interconnected with health problems. Policy-makers should thus focus on all environmental targets linking with health targets as identified in the table above, and should prioritise the most directly enabling and widely linking environmental targets to achieve maximum impact.

All of these themes ought to be reflected strongly in the programme of work for UNEA-2 and UNEP emerging from the meeting. The preliminary analysis of the draft resolutions for UNEA undertaken for this report suggests that some of the themes are not strongly enough represented in those resolutions. For example, further efforts should be made to incorporate strategies to prevent disaster-related deaths by increasing resilience against disaster and to create green spaces for improvements in mental health. Whilst policies to decrease waste from industrial processes are well tackled by the resolutions, we would like to see a more thorough treatment of the environmental targets related to eliminating hunger and ensuring universal access to clean water, not least as these were the health issues which were most deeply interrelated with environmental themes.

Stakeholders should call for the full coverage of health and environment-related links in the UNEA resolutions during this year's meeting, and continue this advocacy throughout further international conferences. Where international fora do not deal with these links successfully, national governments and regions should take on our paper's analysis to ensure that health and environment issues are tackled optimally with a targeted and integrated policy formula.

