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Original Research

Health and sustainable development: an analysis of 20 European voluntary national reviews

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ABSTRACT

Objectives: United Nations member states agreed Agenda 2030 and the Sustainable Development Goals (SDGs) in 2015. Countries report their progress through Voluntary National Reviews. In this paper, we look at the extent to which the World Health Organisation (WHO) Europe SDG Roadmap (the Roadmap) on Agenda 2030 implementation is reflected in the first 20 Voluntary National Reviews (VNRs) submitted from the WHO European region. In particular, we wanted to look at how integrated the three dimensions of sustainable development were, the identification of health co-benefits and potential-added value from the health sector.
Study design: This was a semi-quantitative analysis of 20 VNRs using an ordinal scale (no evidence, limited evidence, good evidence). Results are presented as frequency tables by criteria and by country.
Methods: We devised an assessment template consisting of 41 criteria based on the nine key areas and a selection of the proposed areas for action in the Roadmap. Each VNR was then assessed and scored against these criteria to produce country-specific and average scores for each of the nine key areas and the 25 measures we selected.
Results: Countries generally have good evidence on key areas such as governance, monitoring, leaving no-one behind and multipartner cooperation. They have less evidence on the key areas of health determinants, healthy settings, health literacy and investing for health. Many countries link the economic and environmental dimensions of sustainable development but not the interplay with the social (health and well-being) dimension. Some countries specifically highlighted commitments to support developing nations but few recognised the impact of domestic policies on planetary boundaries or the health of future generations.
Conclusions: We found little evidence that the health sector has had a major strategic influence on actions which affect wider determinants (or health co-benefits). The WHO Europe SDG Roadmap offers a means and an opportunity for redressing this weakness, but this may require health professionals to work within their communities across all three dimensions of sustainable development.

Introduction

Health, well-being and their determinants are at the heart of the United Nations 2030 Agenda for Sustainable Development[1] and its 17 Sustainable Development Goals (SDGs).[2] The SDGs are universal, interdependent and require the integration of the environmental, economic and social domains of sustainable development. They are supported by 169 targets and 232 indicators[3] with published guidance[4] to assist countries in undertaking voluntary national reviews (VNRs). Moreover, 65 countries submitted VNRs in the first two years[5] (22 in 2016 and 43 in 2017).

The World Health Organisation (WHO) Europe adopted the 'Roadmap to implement the 2030 Agenda for Sustainable Development'[6] (the Roadmap) to assist Member States. This identifies nine key areas (five strategic directions and four enablers) with 53

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potential measures/actions which could be enacted by European countries.

The WHO Roadmap and Agenda 2030 share common themes but couched in different languages. For example, the Roadmap frequently refers to the 'health-in-all-policies approach' and using skills from other sectors. Agenda 2030 makes no reference to health in all policies but emphasises commitments to 'achieving sustainable development in its three dimensions – economic, social and environmental – in a balanced and integrated manner'. Important areas for common purposes include nutrition and transport, so changing the way we eat can be good for our health and good for the planet[7] and making it easier to walk and cycle can make us fitter, improve our local air quality and mitigate climate change.[8] An important challenge for those working in the health sector is to align their ambitions with those working on environmental sustainability, and in doing this to use language that helps achieve common goals.

There is an extensive literature on how countries can or should implement the SDGs. One method is to look at actual progress on those targets and indicators which are most directly related to health outcomes.[9] This provides fairly robust numerical data on progress but does not relate this to the policies that different countries have taken to implementation. Another method is to look at the potential interactions between different SDGs and consider how the positive effects can be enhanced and the negative effects ameliorated.[10] This is helpful on general policy development but does not look at country-specific challenges and actions. Others have focussed on core principles such as gender equality and noted that data monitoring in VNRs is not the same as evaluating progress.[11]

In this paper, we explored how countries were approaching implementation, with a particular focus on health, either as a policy objective or as an anticipated co-benefit. We analysed the first 20 VNRs submitted by WHO European countries to the United Nation's (UN's) High-Level Political Forum against criteria we derived from WHO Europe's SDG Roadmap.

The objectives were as follows:

1. To establish if and how health is integrated into country-specific plans and processes for SDGs as a whole;
2. To establish if the considered actions, plans and commitments against the nine key areas within the Roadmap were considered;
3. To explore whether countries are integrating the three dimensions of sustainable development.

Methods

We analysed the VNRs from the 20 WHO Europe countries that had submitted VNRs with full English translations to the UN's High-Level Political Forum website[5] by 1 October 2017 using an assessment template (Table 1. VNR assessment template. Uploaded in the data repository).

This template was developed from the WHO Europe Roadmap[6] which had nine key areas (five strategic directions and four enablers) and 53 potential measures/actions. From these 53, and by a discussion with WHO Europe, some were excluded as they (in effect) repeated each other, some to ensure a focus on those that were more important to public health and the health sector and others because they were very hard to assess. This left 25 possible measures.

To objectively assess these 25 possible measures, we developed 41 specific and measurable criteria (details in VNR Assessment Template). For a few of the measures, the criteria were identical to the possible measure while for others the criteria were minor rewordings. There were many possible measures where the criteria had to be developed. This was initially done by analysing three of the VNRs to identify how the possible measures were being approached and developing draft criteria. We then used the finalised VNR assessment template to reanalyse these 3 VNRs and a further 17 VNRs.

Semi-quantitative analysis

Three of the VNRs were initially assessed by both assessors to develop a consistent approach to scoring. After this, each VNR was then read and assessed by either Stephen Morton (SM) (12/20) or Graham Bickler (GB) (8/20) and each of the 41 criteria assessed and scored. The scores were zero (no or minimal mention), one (mentioned but without full exploration or clarity) or two (mentioned and explored in a comprehensive way). If there was a doubt as to the interpretation, a more optimistic assessment was made, and if one assessor still found interpretation difficult it was discussed and agreed with the other assessor.

Average scores were calculated for each criterion, measure and key area (strategic direction and enabler) across all 20 countries and for each country across all criteria. We also analysed GB's and SM's average scores to test consistency.

Qualitative analysis

In reading the VNRs, we used a form of content analysis. This included word searches and key phrases, concepts and themes to assess the extent to which the measures/actions in the Roadmap were being met.

Results

Looking at the VNRs as a whole, there were large variations in how countries approached SDG implementation and how the VNRs were written, even though many used the UN's suggested guidelines for VNRs. While all reported on health and well-being to some extent, each started from a different position and had different priorities. Most focussed on progress within their country, but some devoted large parts to international work. Several emphasised SDG16 (Peace, Justice and Strong Institutions) in the context of international cooperation, amid concerns about violence, human trafficking, terrorism and cybercrime. While some countries committed support to developing countries, there was less thought on how domestic policies affected the global environment.

All raw scores for each criterion for each country, averages for each country, criteria, potential measure and key area and scores for each assessor are included in the detailed spreadsheet (Table 2. Assessment scores. Uploaded in the data repository). While there were differences between the assessor's average scores, these were small and do not alter the overall conclusions. The summary table below shows the average scores (range 0–2) for each of the SDG Roadmap's selected potential measures, strategic directions and enablers across the 20 VNRs.

The following section is a brief descriptive summary of the findings for each key area (brackets show the average score for that area):

Advancing governance and leadership (0.98)

Most countries had clarity about structures and processes; key leaders were identified and many had plans which could be adapted for SDG implementation. There was less clarity on plans for strengthening public health institutions or operations and limited

Table 1
Average Scores for the 9 key areas and 25 selected potential measures* in the SDG Roadmap

SD1: Advancing governance and leadership 0.98	
Measure SD1A Integrating health and well-being	1.20
Measure SD1B Developing roadmaps for the implementation of the SDGs	1.40
Measure SD1E Strengthening public health institutions	0.35
SD2: Leaving no one behind 0.95	
Measure SD2A Improving access to high-quality health and education services	1.65
Measure SD2B Ensuring quality conditions for early childhood development	1.03
Measure SD2C Fostering a healthy workforce	0.80
Measure SD2D Developing universal social protection	1.13
Measure SD2H Investing in environmental protection	0.50
Measure SD2J Preventing disease and premature death among refugees	0.60
SD3: Preventing disease and addressing health determinants by promoting multi- and inter-sectoral policies and action throughout the life-course 0.49	
Measure SD3A Identifying and communicating the evidence base for co-benefits	1.08
Measure SD3B Systematically adopting health in all policies	0.45
Measure SD3C Legal and regulatory frameworks that tackle shared risk factors	0.38
Measure SD3F Developing national portfolios of actions on environment and health	0.05
SD4: Establishing healthy places, settings and resilient communities 0.45	
Measure SD4B Create spaces that are supportive to groups of all ages and levels of ability	0.53
Measure SD4C Engage communities in identifying places that are supportive health	0.50
Measure SD4F Increase the resilience of households and communities	0.33
SD5: strengthening health systems for universal health coverage 0.48	
Measure SD5A Strengthen the capacity of health systems for universal health coverage	0.85
Measure SD5D Increase the social, economic and environmental sustainability of health systems	0.10
EN6. Investment for health and well-being 0.58	
Measure EN6C Investment targets for providing essential public services for all	0.95
Measure EN6E Investment in evidence-informed health and co-benefits	0.20
EN7. Multipartner cooperation 1.00	
Measure EN7A Raising awareness regarding the SDGs and their implementation	1.20
Measure EN7E Strengthening the coalition of partners on public health to address SDG implementation.	0.80
EN8. Health literacy, research and innovation 0.45	
Measure EN8A Strategies to strengthen health literacy and information technology	0.45
Measure EN8C Strengthening mechanism for creating health literacy about the SDGs for parliamentarians	0.45
EN9. Monitoring and evaluation 1.45	
Measure EN9B Prioritizing the indicators and performance objectives for the health-related SDG targets	1.45

*Abbreviated titles only. See online assessment template for the full text of selected potential measures.

evidence that health departments were involved in wider strategies for sustainable development.

Leaving no one behind (0.95)

Many identified actions on access to essential public services such as health and education, protecting households from deprivation/poverty and improving employment security. There was very little mention of action to maintain healthy workforces or to improve refugee, asylum seeker or migrant health, although some countries reported on targeted support measures for vulnerable groups or legal frameworks to promote gender equality. Although many referred to action on environmental protection, this was rarely seen as a strategy to reduce health inequalities, even though disadvantaged groups were often most affected by poor air quality, inadequate housing and contaminated land.

Preventing disease and addressing health determinants by promoting multi- and inter-sectoral policies and action throughout the life course (0.49)

Many countries emphasised activities that are good for the economy and the environment. There was less emphasis on links between economic and social dimensions, mostly limited to population benefits from secure employment and good health or the direct effects of better air quality and sanitation. Many countries proposed climate change action but failed to link this to potential benefits from improved air quality, increased physical activity, healthy eating and reduced obesity.

While there was much agreement on the principle of integrating the three dimensions of sustainable development, this rarely led to inter-sectoral action to improve health and well-being. There was little consideration of health in all policies. Although legal and regulatory frameworks were considered for some SDGs (energy and climate, trade and employment, marine environment and fisheries), these were not usually applied to improve health either via environment protection or behaviour change.

Establishing healthy places, settings and resilient communities (0.45)

Some countries reported regional government actions in federal states, dependent countries and/or city regions areas. These were evidence of commitment, but may not show full endorsement within the country. While several countries had commitments on the natural environment, they did not usually specify improving access to green or blue space for those who might benefit most. Even the co-benefits from climate change mitigation in urban areas were rarely mentioned. There were limited attempts to engage with local communities on the benefits of natural habitats or mechanisms to empower them to protect against or respond to risks and emergencies. This may be because VNRs were national documents and thus omitted reference to local healthy city strategies, even in countries where these have a long history. However, many countries did recognise that local government is the frontline for delivering key services and engaging with local citizens.

Strengthening health systems for universal coverage (0.48)

Many countries had clear commitments on effective prevention programmes and ensuring access to essential health services but few provided information on uptake or outcomes for specific

groups. There was little discussion of the need to increase health systems' social, environmental or economic sustainability other than general aspirations to improve public sector procurement. Several reported on the provision of Universal Health Coverage (UHC), on enhancing essential health services and developing the health workforce. There was a recognition that gender-based norms and values affect opportunities for women and action on teenage pregnancy and adolescent and sexual reproductive healthcare and rights.

Investment for health and well-being (0.58)

Many VNRs described commitments or plans for investment to support sustainable development, particularly on infrastructure and reshaping the economy. There was little to suggest that evidence informed investment is actually happening, particularly related to future health outcomes. In general, there was a greater focus on economic growth, if possible decoupled from environmental damage, than with responsible consumption and production. Few VNRs considered investment in the health and well-being of future generations. Several called for official development assistance (ODA) commitments to be honoured.

Multipartner cooperation (1.0)

This showed reasonable commitment. Many VNRs had commitments on public and partner engagement and some built on existing consultation programmes on strategies and plans either for sustainable development or for visions of social, economic and environmental scenarios. However, it was difficult to judge the depth of reach in engagement activities, as well as the potential impact of current engagement on future national policies.

Health literacy, research and innovation (0.45)

There were a few plans to improve public understanding of co-benefits from sustainable development, most noticeably in the lack of communications on health benefits from sustainability. There were a few examples of innovative research or IT strategies on public engagement. The involvement of parliamentarians on sustainable development was rarely mentioned. Although it may be the latter was an error of omission, it suggests difficulties in democratic engagement on the wide-ranging policies needed for sustainability and the scale and nature of the challenges behind the SDGs.

Monitoring and evaluation (1.45)

Most countries had considered what data were available and had plans to address at least some of the areas where indicators were lacking. Substantial efforts were reported in assessing data availability, quality, coverage and dissemination. Some VNRs linked this work to the countries' priorities for action on sustainable development.

Discussion

Main findings

Previous papers have looked at health outcomes/progress on indicators or have explored the links and synergies between the various SDGs. This study assessed the extent to which the strategic directions and enablers in the WHO Europe SDG Roadmap were reflected in VNRs, what sorts of processes countries have used and what their priorities were. This provides a distinct and systematic assessment of VNRs through the lens of health and so offers lessons and learning points for the health sector specifically, and all sectors more broadly.

The main finding was that the potential health-related gains from wider actions on sustainability were not reflected in the 20 VNRs. Countries showed a willingness to address challenges relating to governance/leadership, multipartner cooperation, monitoring and 'leaving no one behind'. Findings were mixed on investment for health, addressing health determinants, strengthening health systems, healthy settings, health literacy, research and innovation. They particularly struggled with big challenges around responsible consumption and production and on protecting planetary boundaries.

For example, there was a degree of commitment to intersectoral work and support for the principle of integrating the three dimensions of sustainable development, but limited discussion of the co-benefits from integrating the three dimensions and even less on potential health benefits from wider action on sustainability. Our evidence suggests that the health sector did not have a major strategic influence outside of health service delivery and traditional approaches to improving health outcomes but this would benefit from more local exploration within the countries included. There were occasional hints at more progressive alliances, for example around sustainable agriculture linked to healthy nutrition and around gender equality and universal education linked to sexual and reproductive health but limited evidence that health considerations (particularly for future generations) were influencing major strategic policy decisions; that is, limited evidence of a health-in-all-policies approach.

Limitations of the study

These fall into two main areas:

1. *Those associated with the VNRs themselves*.

The study only assessed what was in the VNRs and these may not fully describe actions that are actually happening, particularly at the local level, e.g. through healthy cities initiatives. These early VNRs were being prepared at the same time as the Roadmap was being finalised. Countries may not have seen the full detail on the nine key areas, but earlier drafts of the Roadmap had been discussed extensively by member states. The purpose of this assessment was to judge whether the underlying ideas and proposals in the Roadmap were reflected in the VNRs.

2. The VNR assessment process.

There was inevitably subjective judgement in deciding which possible measures to assess, what criteria to use to assess them and in the actual assessments. To compound this, the VNRs were often lengthy, wordy and lacked clear evidence. For example, there were few references to the Roadmap as a whole or to individual criteria, such as health in all policies, so the analysis required interpretation to determine if countries were reflecting the same philosophies/approaches as those in the Roadmap, even when the language was different. In doing this, we gave a more optimistic score if there was doubt, so any bias would be optimistic.

Only the first 20 VNRs were assessed, and these may not have been representative of all the 53 WHO Europe countries. Moreover, 15 of these (75%) were from World Bank defined high-income countries, compared to 34/53 (64%) across all Europe. This probably provided more optimistic scores than across all Europe.

Only 25 of the 53 suggested measures in the WHO Roadmap were assessed and the VNRs were not double marked. There were small differences between the average scores of each assessor, but these were minor and unimportant in relation to the overall findings. Nonetheless, there is an element of inter-observer variation and a degree of selectivity in what has been analysed.

In calculating average scores for each key area, we first calculated average scores for each measure to avoid giving excess weight to those measures with multiple criteria. However, overall averages for each country are unweighted averages for all criteria.

These limitations are important as some produce a consistent optimistic bias, but others create random effects, unknown biases or limit the scope of the assessment process. Despite this, we are clear that the main thematic findings are robust as the results in relation to them are consistent.

Implications

Despite the limited evidence that health considerations have shaped these early VNRs, there are clear implications for how the health sector should engage with the SDGs. Although some of these big sustainable development challenges can seem overwhelming,[12,13] health professionals should avoid the temptation to focus on areas they understand best and where their technocratic expertise lies. This would be a mistake for two reasons.

Firstly, the health gains from the action on wider determinants can be much greater than from specific health programmes. Failure to capture such wider health co-benefits means that future impact assessments or economic evaluations will underestimate the potential benefits of measures to enhance sustainability. Secondly, the future health threats from failure to act on these sustainability challenges are enormous and recent WHO thinking is consistent with a broader health approach.[14,15]

These findings suggest that the health sector could most effectively use Roadmap in several ways:

Where the evidence is strong, such as the synergistic benefits on climate change and health from the action on nutrition and physical activity, the health sector should ensure that this is consistently presented and reinforced in current strategies.

Where there is some evidence, but it is difficult to quantify the level of benefits, e.g. mental health benefits and climate mitigation from urban green and blue space, the health sector needs to promote collaborative research to identify good practice which maximises return on investment across SDGs.

There are inevitable limitations in a preliminary analysis of formal national submissions to the UN, but this type of approach could be enhanced by local knowledge as part of a wider collaboration to assess further VNRs.

Finally, health professionals could use their engagement with local communities to develop common narratives on sustainability and health. We have noted some case studies within the VNRs which could be used to this effect and our findings also show an opportunity for joint work on healthy settings and health literacy.

The core challenge for the health sector is not just to consider how the global goals can help to improve health outcomes but to assist other sectors in achieving their goals on sustainability. In doing this, we must ensure that as many health benefits as possible are captured on the positive side of the cost–benefit analysis (including health benefits for future generations). This means making the best use of available tools from international health organisations and researchers to identify and measure the widest range of health benefits that can be linked to each sustainable development goal or target.

Author statements

Ethical approval

Not required. All the information used in the study was already publically available, and no individuals or personally identifiable information were involved.

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Competing interests

Two of the authors have some investments in renewable energy and small scale environmental projects.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.puhe.2019.10.020.

References

1. United Nations General Assembly. *Transforming our world: the 2030 Agenda for sustainable development*. New York: United Nations; 21 October 2015. http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E. [accessed 12 February 2019].
2. The united nations sustainable development Agenda. In: United nations/sustainable development goals: 17 goals to transform our World (website). http://www.un.org/sustainabledevelopment/development-agenda/(accessed 12 February 2019).
3. SDG Indicators: Global indicator framework for the sustainable development goals and targets of the 2030 Agenda for sustainable development. https://unstats.un.org/sdgs/indicators/indicators-list/(accessed 18 February 2019).
4. *Voluntary common reporting guidelines for voluntary national reviews at the high-level political forum for sustainable development (HLPF)*. https://sustainabledevelopment.un.org/content/documents/17346Updated_Voluntary_Guidelines.pdf. [accessed 12 February 2019].
5. Voluntary national reviews database. https://sustainabledevelopment.un.org/vnrs/(accessed 18 February 2019).
6. World Health Organisation; Regional Office for Europe. Roadmap to implement the 2030 Agenda for Sustainable Development, building on Health 2020, the European policy for health and well-being. http://www.euro.who.int/__data/assets/pdf_file/0008/345599/67wd09e_SDGroadmap_170638.pdf?ua=1 (accessed 12 February 2019).
7. Willett W, Rockström J, Loken B, Springmann M, Lang T, Vermeulen S, et al. *Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems*. Published online, www.thelancet.com; January 16, 2019. https://doi.org/10.1016/S0140-6736(18)31788-4.
8. Petrokovsky C, Davis A. *Working together to promote active travel: a briefing for local authorities*. London: Public Health England; 2016.
9. GBD 2016 SDG Collaborators. Measuring progress and projecting attainment on the basis of past trends of the health-related Sustainable Development Goals in 188 countries: an analysis from the Global Burden of Disease Study 2016. *Lancet* 2017;**390**:1423–59. https://doi.org/10.1016/S0140-6736(17)32336-X. Published Online September 12, 2017.
10. Nilsson M, Griggs D, Visbeck M. Map the interactions between sustainable development goals. *Nature* 16 June 2016;**534**:320–2.
11. Hofer-Olusanmokun S, Zengeni T, Tateossian F, Negroustoueva S, Manriques CO, El-Saddiq K. Equity-focussed, gender-responsive evidence: a blind spot in VNR reporting, http://pubs.iied.org/17497IIED (accessed 27 February 2019).
12. Emmott S. *10 billion*. London: Penguin Books; 2013.
13. Klein N. *This changes everything*. Penguin Books; 2015.
14. World Health Organisation. Health, environment and climate change. EB144/15. Draft WHO global strategy on health, environment and climate change: the transformation needed to improve lives and well-being sustainability through health environments. http://apps.who.int/gb/ebwha/pdf_files/EB144/B144_15-en.pdf (accessed 28 February 2019).
15. World Health Organisation. Health and climate action. Policy brief. WHO Europe 2019. http://www.euro.who.int/en/health-topics/health-policy/sustainable-development-goals/publications/2019/policy-briefs-on-health-and-the-sustainable-development-goals/sdg-13-health-and-climate-action (accessed 27 March 2019).