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Public health as a human right: the evolution of the concept from the early modern age to contemporary times

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Alla mia famiglia,
a chi c'è sempre stato.

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ABSTRACT

Questa tesi magistrale, dal titolo "Public health as a human right: the evolution of the concept from the early modern age to contemporary times", propone un'analisi del percorso evolutivo che ha visto come protagonista il concetto di salute pubblica, public health in inglese, dall'età moderna all'età contemporanea. Durante il periodo d'analisi relativo all'età moderna il focus verrà posto sulla città porto di Venezia, l'allora capitale della Repubblica Serenissima. La scelta di porre il focus principale sulla città di Venezia è dovuta al fatto che, essendo una delle principali città porto dell'epoca, Venezia rivestì un ruolo definibile egemonico sotto vari aspetti, da quello economico a quello sociale, culturale, medico, politico e militare. L'essere uno dei principali hub economici del tempo rappresentò per Venezia sia un'opportunità che una sfida, in quanto dovette essere in grado di rivestire un ruolo pionieristico per quanto riguarda l'amministrazione della salute pubblica. I numerosi scambi commerciali vedevano muovere all'interno della città persone e merci provenienti dalle altre città porto, rappresentando un rischio per la salute pubblica. Si vedrà nel prosieguo del primo capitolo come, con l'avvento dell'ondata di peste che colpì l'Europa tra il 1347 ed il 1351, Venezia seppe rispondere alla novità rappresentata dall'epidemia di peste attraverso nuove forme di contenimento e prevenzione del contagio ideando nuove misure amministrative che rappresentavano un'assoluta novità per l'epoca. Lazzaretti, contumacie, scambio di informazioni, quarantene, Fedi, Patenti e Bandi di sanità, procedure di isolamento, di ventilazione e di sanificazione e la costituzione di istituzioni, prima temporanee e poi permanenti, come le Magistrature di Sanità, nonché le numerose attività di prevenzione, furono pratiche sia mediche che amministrative che permisero a Venezia di rivestire un ruolo di leader nella risposta all'epidemia di peste, successo che riconfermò il suo ruolo egemonico sotto numerose prospettive. Il file-rouge che guiderà la tesi sarà quello del percorso evolutivo del concetto di salute pubblica e della sua disciplina. Nel primo capitolo si evidenzierà come in età moderna lo scopo principale delle politiche e delle misure di salute pubblica fosse il contenimento di eventuali ondate pandemiche, ma come, allo stesso tempo, la *ratio* sottostante fosse quella di mantenere la sicurezza dei porti e delle città porto al fine

di garantire il normale ritmo degli scambi commerciali, interesse principale dell'amministrazione pubblica dell'epoca.

Nel secondo capitolo, dal titolo "Legislative and social public health framework", verrà svolta un'analisi più contemporanea del concetto di salute pubblica, in questo caso adottando un'ottica più legislativa e sociale. Si analizzeranno quindi alcuni passaggi legislativi relativi al concetto di salute pubblica e le ripercussioni che questi hanno in ambito sociale. Dal punto di vista nazionale italiano verrà analizzato l'articolo 32 della Costituzione Italiana, articolo in grado di offrire una chiara visione di come la salute pubblica possa essere intesa sia in senso individuale che collettivo. Si passerà poi all'analisi del recente emendamento degli articoli 9 e 41 della medesima Costituzione, attuato attraverso la Legge costituzionale 11 febbraio 2022, n. 1 , recante "Modifiche agli articoli 9 e 41 della Costituzione in materia di tutela dell'ambiente". Tale emendamento offre infatti una chiara rappresentazione di come il concetto di salute pubblica stia evolvendo nel corso del tempo, rendendo necessarie modifiche delle nostre Carte Fondamentali al fine di tutelare quelli che oggigiorno sono elementi riconosciuti sempre più come essenziali ed irrinunciabili come, in questo caso specifico, la tutela dell'ambiente, della salute umana e degli animali, e della limitazione delle attività economiche quando esercitate in conflitto con gli interessi tutelati di salute pubblica.

Il capitolo continuerà poi adottando una prospettiva internazionale, trattando alcuni passaggi della Dichiarazione Universale dei Diritti Umani (UDHR), proseguendo poi analizzando i principali programmi ideati e sfide intraprese dall'Organizzazione Mondiale di Sanità (OMS/WHO), principale istituzione operante a livello internazionale atta alla gestione di tematiche di salute pubblica. Saranno in particolare proposti i temi dalla sicurezza alimentare e dei cambiamenti climatici che vestono un ruolo di primaria importanza nella agende pubbliche nazionali ed internazionali, in uno scenario geopolitico globale caratterizzato da quella che può essere definita una policrisi, caratterizzata da una concatenazione sempre maggiore di instabilità di varia natura.

Lo scopo del secondo capitolo è quindi quello di fornire una rappresentazione di come il concetto di salute pubblica si sia evoluto ed ampliato nel corso del tempo, giungendo al giorno d'oggi ad includere un numero di tematiche e di necessità sempre più ampio e

diversificato, inglobando al suo interno e nella sua sfera di interesse aspetti sempre più legati all'ambito sociale, ponendo particolare attenzione alla qualità di vita dei cittadini ed alla tutela dei più fragili, nonché riservando uno spazio di attenzione particolare alla tutela dell'ambiente, dalla quale deriva una richiesta di attenta e sana pianificazione degli ambienti in cui viviamo, in particolare quelli urbani. A sostegno di tale percorso evolutivo viene riportato nell'ultimo paragrafo un evento storico, conosciuto come "The Great Stink", riguardante la città di Londra della seconda metà del diciannovesimo secolo. La capitale Britannica, in preda ad un evento drammatico dal punto di vista di igiene pubblica, attraverso politiche si salute pubblica mirate alla tutela dei cittadini in un'ottica di lungo termine seppe dare una risposta concreta ed efficace alla crisi sanitaria che la colpì, evidenziando quindi come, nonostante le ancora ridotte conoscenze in ambito medico e scientifico, attraverso una decisa e ben strutturata azione amministrativa e politica si possano fronteggiare crisi di varia natura.

Il terzo ed ultimo capitolo, dal titolo "Public health future-oriented vision: analysis of two concrete programmes", offrirà a sua volta due esempi concreti proposti a livello internazionale al fine di tutelare ed incrementare il livello di salute pubblica a favore dei cittadini.

Verranno analizzati quindi l'ambizioso progetto promosso dall'Unione Europea e relativo alla creazione di una Unione Sanitaria Europea (European Health Union/ EHU), il cui scopo principale è quello di garantire ed accrescere il livello di benessere, salute e salute pubblica tra i cittadini dei paesi membri dell'Unione Europea. A tale scopo verranno promosse attività ed istituzioni volte ad un accrescimento della cooperazione e del coordinamento relativamente all'information management ed allo scambio di informazioni, macchinari e personale medico, nonché di medicinali.

Il capitolo proseguirà trattando alcuni degli aspetti principali relativi all'Agenda ONU 2030 la quale, con i suoi 17 Obiettivi di Sviluppo Sostenibile (OSS/ SDGs) e 169 targets, mira e creare, entro il 2030, una società più equa e sostenibile per tutti. Coerentemente con l'analisi del tema della salute pubblica, verranno analizzati in particolare gli Obiettivi di Sviluppo Sostenibile numero 3, chiamato "Good health and well-being" nonché il numero 11, con focus su "Sustainable cities and communities". L'analisi di questi due

obiettivi permetterà di porre in evidenza il legame tra salute pubblica e sviluppo delle città, contesti urbani relativamente ai quali, essendo i luoghi più densamente popolati a livello mondiale, è fondamentale garantire uno sviluppo strutturato ed equo all'insegna della tutela della salute pubblica.

Nella sezione conclusiva verrà data evidenza di come il concetto di salute pubblica abbia oggigiorno abbandonato l'obiettivo principale di protezione delle tratte economiche e commerciali tutelato in passato, dove la tutela del cittadino rivestiva un ruolo marginale. Nel tempo il concetto di salute pubblica ha subito una sorta di processo evolutivo, giungendo oggigiorno alla consapevolezza che il suo obiettivo finale deve essere quello di garantire una adeguata e sempre migliore qualità di vita del cittadino, visto sia come singolo che come membro di una collettività.

Si evince quindi quanto sia complesso il concetto di salute pubblica, rivestendo una molteplicità di aspetti che quotidianamente fanno parte della vita dei cittadini. La necessità di sviluppare politiche di salute pubblica richiede una visione sistemica e programmata nel lungo termine, essendo queste politiche di non facile attuazione ed implementazione, e che, per essere efficaci e dare i loro risultati necessitano di tempo, in particolar modo nel contesto di policrisi che stiamo affrontando in quest'epoca.

Mantenendo uno sfondo dedicato alle relazioni internazionali ed agli ambiti sociali, culturali e politici, il fine ultimo di questa tesi magistrale è quella di evidenziare come, al fine di raggiungere tale ambizioso e desiderato obiettivo, ovvero quello di accrescimento di tutela della salute pubblica, intesa nel suo senso più ampio, la cooperazione e la collaborazione tra i paesi e le istituzioni di vario ordine e grado rivesta un ruolo essenziale, essendo sempre più frequente che le minacce in ambito di sanità pubblica eccedano i confini nazionali, avendo un'influenza di più ampio raggio.

INTRODUCTION

Starting with a historical perspective, I would like to analyse how the concept of public health has developed, with a focus on one of the principal port city of the early modern age and capital of the Serenissima Republic, Venice. Over the centuries, public health became a practice in which science, politic, with special emphasis on data collection and its management, medicine, and administration were intertwined.[1]

As port cities were the most exposed to the epidemic threats that followed in the period of the early modern age, they were certainly also the principal laboratories where knowledge and practices, both administrative and medical, have been developed and endowed with new instruments becoming capable of counteracting the negative effects of pandemics. In the specific case of Venice, I will analyse how, in order to contain the spread of the plague, the city administration developed governing bodies dedicated exclusively to the management of public health, to which a large part of the city's public funds was destined. Their role, over time, was increasingly recognised as having a strategic function. Then, I would like to emphasise how the basis of its success in the strategic organisation against the spread of pandemics has been not only represented by its medical and biological knowledge, that, despite being considered at the forefront in comparison with the other main cities of the time, was still in fact marginal, full of scientific gaps that would only be filled with the passing of centuries and technological and scientific progress. The main role has been instead played by the highly organised administrative machinery, which found the main success in the development and implementation of novelties such as sanitary protocols, quarantines, Lazarets and health Magistracies.

Christopher Hamlin, historian of science, technology and medicine, is one of the main supporters of this vision, proposing in its studies how public actions could represent efficient and effective responses to public health crises. Through its numerous research

[1] Delogu. G., 2022. Inventare la sanità pubblica in età moderna: Venezia e l'alto Adriatico. *Edizioni Ibis*, p.8

focused on health related public needs, he evidenced how the role of nature and social aspects, like religion and culture, could deeply affect on disease causation.[2] He claims that defining public health as a simple response to epidemic will fail in reflecting a complete idea in relation to the numerous aspects and institutions public health deals with.[3] Public health must be considered over the simple formula of wellbeing for the population. Instead, several are the aspect that need to be considered. Social, legislative, political, technical and economic factors must be taken into account, accordingly to the systemic vision necessary in order to correctly evaluate public health programmes and its consequent achievements.[4]

Furthermore, the role of social inequalities, in the past, had always been underestimated while dealing with public health, while instead representing a useful benchmark to compare public health management goals within a society. Dealing with the topic of inequalities in relation to public health clearly highlights the development path undergone by such a complex issue over the epochs. Different schools of thought have born in the decades, and each of them associate different powers to the public health management. Philosopher as Richard Epstein claim that public health must be limited to the control of infectious diseases, while others, like epidemiologists Ichiro Kawachi and Richard Wilkinson recognise social inequalities and public health in a strong interdependent situation. These different visions led to the definition of three stages of modern public health, where the first stage is found in the basic activity of epidemic response. The second stage, instead, is concerned about regulation and provisions from medical care to social life. The third and last stage is a utopic one, aiming at increasing human living condition.[5]

The philosophic side of public health identify at the same time two historical stages of public health. While the one adopted in the past, as in the early modern age Venice analysed in the first chapter, was definable as a "moral stage", where disease derived from

[2] Hamlin Christopher, available at: https://nd.academia.edu/christopherhamlin
[3] C. Hamlin, Public Health, in M. Jackson (ed), The Oxford Handbook of the History of Medicine, Oxford, *Oxford University Press*, 2011, p. 411
[4] Ibidem, p.412
[5] Ibidem, p.412

sin, so, from the negative behaviour of the citizens, the development to the modern one, called also environmental stage, found disease as coming from filth, so, from the bad management of the context and the society in which people live in.[6]

This consciousness led to the question, even today valid, of which socio-economic factor of the population creates the conditions for the proliferation of illnesses and, specifically, if these conditions could be regulated through public health provisions.[7]

The fundamental research question I will try to answer through my work is that of identifying the changing approach characterising public health management over the past, starting, as reported above, focusing on the early modern age Venice, shifting then in the second and third chapter to a more actual context, observing the social, administrative and legislative developmental path undergone by public health, always maintaining the focus on the international scenario.

The second chapter will in fact be focused on the legislative and social public health framework characterising the concept of public health, trying to offer a complete, despite brief, overview of some of the principal passages regarding the development path undergone by public health over the last decades, proposing evidences in favour of the necessity to adopt a systemic approach and future oriented vision while dealing with such a complex thematic, evidencing how public health policies could be considered effective and efficient only through international cooperation and coordination.

From the legislative point of view, the first part of the second chapter will deal, adopting an Italian national lens, with the Italian Constitution, in particular focusing on its recent 2022 amendment, which increased attention to the environmental aspect concerning public health, and on its article 32, dedicated to the health in its double soul, so, offering both an individual and a collective perspective of public health.

The chapter will continue focusing on public health on the international level, analysing some of the principal organisations and institutions, like the UN and the WHO, playing an active role in relation to public health, continuing dealing with the numerous

[6] Ibidem, p.412
[7] Ibidem, p.422

documents, agreements and covenants regulating the public health sphere, giving attention to the new facets included by the ever-changing public health concept. It will in fact pose attention to the role of the environment and of the new social and human rights vesting an increasing fundamental role in the definition of public health. The chapter, maintaining an international relations and political focus, will conclude proposing some new technical terms that nowadays, despite being recognised in the past, represent essential aspects while dealing with public health measures and policies.

The third and last chapter will deal with the concept of public health, offering a future-oriented vision, posing focus on the social aspects of public health. Having analysed in the first chapter the public health management in the port city of Venice of the early modern age, the focus will be maintained on the urban context, providing two concrete international programmes that have been announced, and that are still today being implemented, about the enhancement of public health in the urban context, aiming at increasing citizens life quality. The purpose is that of highlighting the new kind of achievements that are at the heart of actual public health policies, evidencing the development path undergone by the concept of public health over the centuries. Those programmes, that will be deeply examined in the chapter, are the UN Agenda 2030, with its 17 Sustainable Development Goals (SDGs) and the European Union project to establish a European Health Union (EHU). About the Agenda 2030 will be particularly considered the SDG number 3, entitled “Good health and well-being”, and the SDG number 11, entitled “Sustainable cities and communities”, due to the strong correlation they provide between public health and cities. Relating to the EHU project will be analysed the information management and cooperation background proposed among the EU member states.

Despite the two different promoting institutions, respectively, the United Nation and the European Union, these two programmes both aim, despite the different instruments and area of interest, at increasing citizens life quality through public health measures, policies and programmes. Moreover, maintaining an international relations and political approach, both the programmes deeply underline the importance and necessity for international

coordination and cooperation among states and institutions, fundamental to grant the good result of these pioneering international projects.

In the chapter attention will be given to the paradigm shift about the core of public health, conceptual change that asks for and increased future oriented vision, for a rethinking of the urban context in a more social perspective, and, consequently, to differently consider prevention and monitoring activities in Urban and Territorial Planning (UTP), increasing the development of long-term policies able to propose a more systemic view, for example adopting, always in relation to the public health core, a Health in All Policies (HiAP) approach. The final remark of the chapter will be that of proposing a rethinking of the cities through social and public health policies, creating urban context where the citizenry will have a central role, being considered the most important asset to be protected within the urban context.

To conclude, the analysis proposed in this thesis is supported by the research and study of both primary and secondary sources. As reported at the end of the work, primary sources are represented mainly by legislative documents, as the Italian Constitution, and the constitutive agreements of international organisations dealing with public health issues such as the World Health Organisation (WHO). Moreover, several documents and agreements dealing with programmes and objectives aimed at increasing and protecting public health have been essential while writing this master thesis. Lastly, institutional websites of international organisation and institution, as the European Commission one, have revealed essential in providing official documents and for their consultation.

Passing to the secondary sources, these have revealed fundamental in order to widen the concept of public health, that is one of the principal purposes of this thesis. Principally scientific articles published in academic journals, together with some books and journal articles, these sources clearly evidence the complexity, width and interconnectedness that characterise the concept and discipline of public health, offering at the same time a more future-oriented vision from a social, cultural and political standpoint. Moreover, in numerous of the analysed articles, scientific and statistical approaches are adopted, offering data and graphics highlighting the importance for the citizenry of the implementation of public health policies and measures.

CHAPTER 1: Public health in the early modern age: Venetian administration and its pioneering role

1.1 Commerce and health administration in Venice

While dealing with Venetian administration during the early modern epoch, a fundamental aspect to be minded is its huge commercial power. At that time Venice traded goods and products from all over the world. That wide range of traded products increased its availability of rare raw materials, enhancing the production of drugs and medicines. One of the most famous drug that made Venice ahead in terms of the availability of medical products was the so-called "*Teriaca*", theriaca in English, a medicine considered to be able to cure every type of illness.

Initially produced as a cure for viper bites, its function as a painkiller led the use of theriaca to be extended to all kinds of illnesses. Venetian theriaca, in particular, was one of the most renowned at the time. Many thought that the high property of Venetian theriaca was due to the high quality of the meat of vipers from the Paduan hills, an essential ingredient in its production. Venetian theriaca was in fact produced according to a public recipe, jealously protected by the government. The various doses produced in Venice were then branded with a label confirming their Venetian origin, so that the Venetian quality would be recognisable abroad. Behind the success of the Venetian product was indeed the greater quantity of opium used, compared to other theriaca productions, a factor which clearly increased its efficacy as an analgesic.[8]

Venetian renowned production of theriaca highlights the leading role played by Venice in that time from a commercial and medical perspective. Being considered one of the main cities in which goods and products were exchanged, Venice represented a meeting point for merchants from all over the world, and this made the capital of the Serenissima vulnerable to pandemics and new diseases. This is proved also by one of the most famous

[8] Delogu. G., 2022. Inventare la sanità pubblica in età moderna: Venezia e l'alto Adriatico. *Edizioni Ibis*, p.20

Venetian sayings, which stated that "*the soul of commerce is health*".[9] This expression aimed at underlining the close link between commerce and public health in the territories under the Venetian military and administrative control.

This sentence clearly sums up the centrality of public health in guaranteeing the continuation of Venetian trade. The health policies implemented to ensure constant control and effective prevention of the possible spread of disease were mainly based on lazarets, contumacies, isolation procedures and information networks, specific medical and administrative terms, representing novelties in the early modern age epoch, that will be analysed in the next paragraphs.

Being situated in a lagoon represented both an opportunity and a threat for the development of early modern Venice. Such a strategical position permitted to the city to benefit of florid trade and commerce with other port cities, while, at the same time, being naturally protected against the enemies by seabed difficult to navigate quickly. Despite these positive aspects, dirty water characterising the lagoon environments led to the diffusion of poor-quality air, essential factor for the spread of the plague and other aerial diseases.[10]

To increase commerce and trade, several maritime cities in that epoch, differently from Venice, become what have been defined as free port, so, "*a port where it is free for merchants of any nationality to unload and collect their goods without paying duties either on entry or exit*".[11]

While becoming free ports would mean to reduce the fiscal and administrative impact of the government on commerce and trade, public health policies, so, as reported above, quarantine, contumacies, isolation procedures, could not be avoided. While states could freely decide on their fiscal policies, they could not risk a disease outbreak just to facilitate

[9] Andreozzi, D., 2015. The «Barbican of Europe» The Plague of Split and the Strategy of Defence in the Adriatic Area between the Venetian Territories and the Ottoman Empire (Eighteenth Century). SIDeS, «*Popolazione e Storia*», 2/2015, p.225

[10] Stevens Crawshaw, J. L. (2012): Plague hospitals: public health for the city in early modern Venice, *Farnham, Ashgate*, p.1

[11] Delogu. G., 2022. Inventare la sanità pubblica in età moderna: Venezia e l'alto Adriatico. *Edizioni Ibis*, p.67

trade and commerce within their territories. It is clear the threat that public health policies could represent in the short term for merchants and for all those active in trade, despite these kind of policies were being implemented following the *ratio* of protecting commerce and trade in the long-run. The trade-off between the importance of maintaining and increasing commerce and trade activities and the restriction posed by public health regulations and procedures permitted Venice to reach a sort of standard of equilibrium, without which commerce could not continue. If "*the soul of commerce is health*", a commercial power could not risk a disease outbreak.[12]

Until the arrival of the Black Death of the fourteenth century, the measures taken in Venice aiming at circumscribing the spread of pandemics had been of an emergency nature, and this meant that there were several gaps in the responses implemented by the city administration. Increasingly aware of the ineffectiveness of decisions taken in an emergency way, the city authorities realized that a fundamental aspect that needed to be taken into greater consideration was that of prevention. Due to this increased consciousness, in 1440 a commission was created with the aim of researching the causes of the spread of the then called "aerial disease" or malaria.

During the early modern age, epidemics were seen as divine punishment, inflicted due to sin and bad behaviour of the people, spread among the population through bad air. Corrupted bodies created corrupted air, due to God will punishment. People entering into contact each other were affected by the bad air (*mal aria, in Venetian*) breathing from the bodies of the impure, providing for the spread of the evil.[13]

In order to regulate the Venetian citizens both from an ethical, religious and social perspective, numerous public health measures and institutions have been implemented and established. One of the most fundamental institutions founded in order to limit the diffusion of the disease were Lazarets, ideated in order to isolate infected citizens.[14]

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[12] Andreozzi, D. "L'anima del commercio è la salute". Sanità, traffici, rischio e dominio sul mare in area alto adriatica (1700-1750), p.229

[13] Stevens Crawshaw, J. L. (2012): Plague hospitals: public health for the city in early modern Venice, *Farnham, Ashgate*, p.28

[14] Ibidem, p.228

While the lazarets were the places designated for the deposit of goods and the stay of people in case of suspected contagion, in order to prevent them from entering the city and spreading the contagion among the population, "*Contumacie*" have been introduced. These *contumacie* were the variable periods of time during which the goods coming from other ports were subjected to purging and ventilation procedures, operations aimed at cleaning the products from any possible contagion.

Together with good and products, other precious assets coming from abroad, and that could not represent a contagion risk, were information. Information management represented an unvaluable asset for the epoch, that if professionally managed, like in the Venetian case, could assure a leading international role. Despite not representing a contagion spread threat, information has to be purged, that means, have to be checked before being diffused. Already in that epoch, several false information was used among commercial power to damage commercial rivals. Venice, vesting a leading role with its information hub power, could decide which information were true and which one were false. So, probably the most important from a diplomatic and political perspective was the well-structured web of information management developed by the Serenissima Republic in order to be, and to keep other port cities, always updated about the economic, political and public health situation in the principal commercial hub involved in commerce and trade. The hegemonic role vested by Venice in that epoch made its public health measures respected by other port cities not only for health protection, but also, from an economic and political perspective, to not take position against the Venetian one, risking being limited or even worst excluded by trade and commercial activities.[15]

1.2 Venetian answers to the plague outbreaks

With the plague in the Italian Peninsula of 1347–1351, the first pro-tempore Magistracy had been established, but only in 1486 the consciousness that public health needed a

[15] Andreozzi, D. "L'anima del commercio è la salute". Sanità, traffici, rischio e dominio sul mare in area alto adriatica (1700-1750), pp 225-227.

constant surveillance started to be clear, and consequently the first permanent magistracy was created,[16] a permanent institution, called "Magistrato alla Sanità" (Health Magistracy) was established to manage all the aspects concerning the public health in Venice. In fact, already in the 1460, Matteo Vitturi and Paolo Morosini claimed the necessity for Venice to create a permanent administrative structure in order to have a permanent response to new eventual waves of pandemic, and not only a temporary administrative response to be activated in case of necessity, that had already usually demonstrated inefficient.[17] Their opinion was of course supported by the awareness that Venice was a port city, where people, merchants, goods and animals from all over the world came into contact, increasing the risk of contagion. This Health Magistracy had an administrative and political core. It was composed by 8 decision makers: three *Provveditori* and two *Sopra-provveditori*, supervised by an *Avvocato fiscale*. Those 6 components were politically appointed, regulating the Health Magistrate from an administrative and political perspective. From the scientific and medical viewpoint, a P*rotomedico del Magistrato* (the "archiater of the Magistrate") and a *Chirurgo* (a surgeon) were appointed, and those two components were responsible for the operative decision making about, of course, medicine and human health.

Moreover, it must be underlined that as main instruments to contrast epidemics, the Health Magistrate used an extensive information network, an extremely rare, but at the same time effective instrument.[18] In those years started also to increase the awareness that to fight against invisible enemies such as epidemics, prevention and information management were some of the main solutions. Collaboration among different city administrations, control of the movements of people and goods, application of rigid regulations and the provision of strong repressive measures were found out to be the most effective instruments to prevent and limit the spread of the infections among the population.

[16] Ibidem, p.297
[17] Vanzan Marchini, N., 2011. Venezia La salute e la fede. *De Bastiani Editore*, p.74
[18] Delogu. G., 2022. Inventare la sanità pubblica in età moderna: Venezia e l'alto Adriatico. *Edizioni Ibis*, p.25

When Venice was affected by the plague in the 1423, under the government of Francesco Foscari, in order to contrast the diffusion of the epidemic the Senate ordered to collect all the possible information about foreigner and the other states, with the objective of being able to regulate the access to the city to all those coming from suspicious areas. Of course, being one of the biggest commercial centres of the epoch, several has been the doubts about the effective advantages of this politic. Regulating movements of merchants and of their products meant to limit and reduce also commerce, the real international power of Venice.[19]

Domenico Tintoretto, Ritratti dei dogi, Sala del Maggior Consiglio di Palazzo Ducale, Venezia, particolare. Archivio Fotografico - Fondazione Musei Civici di Venezia

One of the principal laws issued by the Senato was that of the 28th of August 1423. The main innovation was the provision for the establishment of a permanent hospital, dedicated to the quarantine of those suspected or confirmed to be affected by the plague, the so-called Lazaretto Vecchio, the first permanent plague hospital in the world. Its main competencies were about the care of the sick, the quarantine regulation and the disinfection of products. This statal hospital was not a classic one, regulated by medical and assistance prerogatives. Indeed, it was an administrative one, in fact, it was requested by a political administration, the Senate, in order to limit the diffusion of the plague. Furthermore, those who did not respect the quarantine and the forced stay in the hospital, were punished with detention and administrative sanctions. The place appointed to host this new administrative structure, or better, administrative hospital, was the *Santa Maria di Nazareth* Island. Due to its location, the term *Lazzaretto*, used to identify these new public structures, came from the vulgarization and the process of laicization of the name of the island, so, *Santa Maria di Nazareth,*[20] nowadays called "*Isola del Lazzaretto Vecchio*".[21]

[19] Vanzan Marchini, N., 2011. Venezia La salute e la fede. *De Bastiani Editore*, p.66
[20] Ibidem, p.68
[21] Ibidem, p.33

The path to a permanent organisation was full of obstacles, as there were several conflicting interests. Such an organisation entailed huge costs in terms of public expenditure. Furthermore, there were many uncertainties regarding the actual effectiveness of this project, which, however, over the years proved to be not only effective, but above all fundamental in guaranteeing a strategic and leading role of Venice in both commercial and geopolitical terms. Thanks to what can be defined as an heated debate, with the opposition, as reported before, of different and contrasting interests among the different categories of citizens, from the politicians to the common workers, from the merchants to the doctors, the city administration, mainly the Senate, understood that the financial and human costs in case of a pandemic were well beyond the ones to be paid for prevention.

This path of increasing awareness made it necessary the creation of a second Lazaretto. In 1468 a new Lazaretto, destinated to the recovery of those who had survived the plague and therefore had to spend a period of forty days, the quarantine, before being allowed to re-enter the community, in order to avoid any risk of contagion after the recovery, has been established. Understood the importance and the efficiency of such well-structured and regulated administrations, this second Lazaret entered into force years later, in 1471.[22] This new structure, called "*Novo*", that in Venetian means "new", was built in the Vigna Murata in front of S. Erasmo.[23] Greater of the utility itself of the new Lazzaretto was what it represented for the population. It was a sort of symbol, representing the possibility to survive the plague, and also to come back in the society and to the everyday life after a period of quarantine.[24] It was seen by the many as a hope symbol.

The implementation of such a project was full of difficulties, and due to the complexities to have a direct control with the inside of the lazaretto, one of the main problems was that of having control of the conditions of those who were recovered. Several members of the personnel destinated to take care of those infected have been condemned or even executed for failing to perform their duties, or even for profiting from their role. For example, many

[22] Stevens Crawshaw, J. L. (2012): Plague hospitals: public health for the city in early modern Venice, *Farnham, Ashgate*, p.20
[23] Vanzan Marchini, N., 2011. Venezia La salute e la fede. *De Bastiani Editore*, p.74
[24] Ibidem, p.75

sold the possessions of dead plague victims, contributing to spread the contagion. Others were profiteering on lazaret funding, serving low-quality or expired food, or not declaring dead patients, while continuing to receive regular funding. Due to those unfair behaviours of some of the care staff of the Lazarets, in 1482 the "*Magistrato al Sal"* established a sort of guidelines, the so-called "*Capitoli*", in order to provide some regulations. Those *Capitoli* established which were the main rules to be followed, applied and respected in the management activity of the Lazaretto, for example about the quality of the food to be served, the responsibilities of the care staff and the amount of their wages[25].

Relating to the administration activities of such structures, there was a strong collaboration between the Senate, the political and administrative governmental body of the Venetian cities, and the religious apparatuses. Given the enormous expenditure of money, resources and energy, the support offered by the Church was essential. In sermons the faithful were expressly asked to make offerings and bequests for charitable works. In order to convince the devotee to economically support the Venetian public health system, they were promised with paradise in the afterlife. In addition, as far as the health personnel aspect was concerned, the use of religious men and women was strongly encouraged, as they worked with dedication and love for their compatriot, and above all, they worked free of charge.[26]

The dual perspective of the disease perceived in early modern age, so, from a religious and a social perspective, led to a strong role played by the Christian church in the administration of plague outbreaks. This is clearly represented by the decision of Venice to define the *Lazaretto Vecchio* as a pious place (*loci pii*), decision that made mandatory for the testators to explicitly ask to their client if they wanted to include Lazarets in their last will.[27]

Venetian institutions deeply rely on religious bodies to receive help in the management of plague outbreaks, aspect that profoundly differentiate the Christian territories by the Muslim ones. While the latter did not define particular policies to stop disease outbreaks,

[25] Ibidem, pag.76
[26] Ibidem, p.70
[27] Stevens Crawshaw, J. L. (2012): Plague hospitals: public health for the city in early modern Venice, *Farnham, Ashgate*, p.18

Venice played a pioneering role, role surely favoured by the Christian religious context the city was permeated in. The Christian culture led to the development of the equation that ordered urban context led to ordered society, conceptual relation that permitted the creation of the concept of safe space.[28]

Always relating with the social and religious aspect, isolation, fundamental public health measure in Venice, was principally based on division of religious and ethnic groups within the city. These different social groups were confined in different areas, in order, in the belief of the time, to guarantee social order and the consequent limitation of incorrect behaviours and so, the spread of disease among the population, risking to limit or even stop trade, activity of paramount importance in Venice.

The clustering of social groups was backed also by the creation of institution for most dangerous and most vulnerable citizens in Venice. For example, institution dedicated to, Jews, Turks and Moors who converted to Catholicism, the *zitelle* for young unmarried women and the *Soccorso* (rescue, in English) for adulterous women and prostitutes were established in order to offer a sort of contact limitation to the rest of the population. While *"[s]ome confined sites were designed to protect the wider city, some [others were designed] to protect the elements or individuals they contained. Some institutions, like the [lazarets], combined these two functions".*[29] This clustering activity aimed at shaping urban space in a social, physical and spiritual order.[30]

Evidencing the link between administrative and religious world in Venice, further the practical help given by religious institutions in fighting against disease diffusion, are several terms born in the epoch. For example, the institution of quarantine takes its name from a holy number in the Bible, forty (*Quaranta*, in Italian). In the Bible this number is often repeated in relation to sacral events, for example in relation to the period of floods. So, the name associated to the Quarantine was indeed a symbolic number, also because the duration of the quarantine period could vary from eight to fifty days.[31]

[28] Ibidem, p.7
[29] Ibidem, p.13
[30] Ibidem, p.14
[31] Ibidem

1.3 Information and disinformation management

Concurrently with the collection of information, the daily activities of citizens were also of enormous importance and had to be regulated and monitored. Some of the principal instruments, or better in this case, documents, for limiting the spread of contagion were what were known as "*patenti di sanità"*, "*fedi di sanità"* and "*bandi di sanità*". The *fede di sanità* was a document that attested the place of origin and those through which those travelling by land had passed. The *patente di sanità* functioned in the same way, except that it was presented by those travelling by sea. Obviously, the risks were greater for those travelling by ship, as numerous were the peoples, the ports, and the goods that came into contact with them. Furthermore, in this document it was reported the name of the vessel, the information about the owner, and some general characteristics, for example, the hairstyle. "*Patenti di sanità*" and "*Fedi di sanità*", were used in order to know the previous cities of departure of people and goods. Knowing the path followed by goods and people was necessary to evaluate the possible risks that letting those travellers and their goods to enter in the city could represent.[32] Depending on the route followed, different were the evaluation, or better, the status, gave to those documents. If the route did not comprehend any risky stay, so the "*patente*" was considered "*libera or non sospetta*" that means, free or non-suspicious. This meant that the ship could freely continue its route, and, of course, that trade and commerce were not going to be slowed or, even worst, stopped. In case of "*patente sospetta*" (suspicious license) a quarantine period was provided, while in the case of "*patente brutta o sporca*" (dirty license), in case the route included a contagious stage, it was forbidden for the ship the enter and to stay in the port.

The third documents, the so-called *bando di sanità*, was a sort of list reporting from which and to which cities travels were prohibited. Those documents were not personal, but were provisions issued by the city administrative bodies and posted in public places in order to make citizens aware of the travel bans.

[32] Delogu. G., 2022. Inventare la sanità pubblica in età moderna: Venezia e l'alto Adriatico. *Edizioni Ibis*, p.33

So, the documents above mentioned relied on the information coming from abroad, without which any information about other cities could be collected. Continuing with the analysis of the communication activities and regulation in the Venetian context of the early modern age, Republic's legal and theological advisor Paolo Sarpi opinion was that information and words can represent both threats and opportunities, dealing instruments in international cooperation and trade and swords with the enemies.[33] In Paolo Sarpi vision, words were powerful instruments to win political battles, evaluating consequently communication as force of the Government.

In that epoch, citizens were thought as just to obey to the decision of the governing elites, with political communications seen exclusively as an instrument to inform the population about the decision and the law to be respected by the many. But through the decades, the use of communication became ever more a power instrument and symbol, with States detaining information hubs controlling information circulation and, so, power both in the military, commercial and legislative arenas. Communication has so passed from a mere use in controlling citizens, to a powerful international instrument able to give huge power to port cities controlling information management and circulation.[34] "*Comunicazione had a technical meaning in Venetian governance, referring to the transfer of information from one governing council to another […]. Comunicazioni were highly regulated and often subject to careful censorship, an instrument of power at the inner core of government."*[35]

Specifically, communication vested a strong position within the Venetian political activities in period of military defeats, moments during which Venice had to count more on its diplomatic body than in its defeated army.[36]

Within the diplomatic offices, the so-called *Relazioni* were fundamental secret documents drafted by Venetian Ambassadors at the end of their office abroad. Those documents vested a fundamental role in the international scenario in which Venice was active, being

33 De Vivo, F. (2007): Information and Communication in Venice: Rethinking Early Modern Politics, Oxford, *Oxford University Press*, pag.1
34 Ibidem, p.2
35 Ibidem, p.4
36 Ibidem, p.6

one of the major commercial harbours of the epoch.[37] Due to the precious information about allies and enemies recorded in these so-called Relazioni, in 1425 a special archive had been established for the conservation of such sensitive official documents. Due to the importance of such news coming from abroad, further a legal and officially recognised information management, also numerous unofficial information system had been developed, and within this scenario, Venetian Ambassadors represented "*golden channels for public knowledge*".[38]

Regarding the Venetian diplomatic activity a core moment can be found in 1542 when a government provision prohibited to all the Venetian nobleman to enter into contact with foreign diplomats, in order to avoid any type of information leaks from within Venice to other commercial powers. For the Venetian elite foreign diplomats were a rich information resource, and vice versa. Moreover, it was not rare that diplomats sold secret information aiming to increase their power and credibility abroad.[39]

Within this context, ambassadors were surrounded by a dense network of informers, who updated the former as soon as some news came from abroad. To make a distinction between the various informers, "Spy was [the] term […] used to refer to one's enemy's informers, whereas one referred to one's own as *[C]onfidenti*, a term implying a more acceptable human relationship".[40]

From a diplomatic perspective, the drastic pandemic situation in the Republic made it clear that it was absolutely necessary to increase coordination and cooperation in order to obtain an effective instrument against the plague. It started to be clear that it was necessary to create a coordination and prevention policy effective not only in the city of Venice, but also in the rest of the territories of the Republic and, furthermore, in collaboration with the rest of the international scenario Venice was in contact. The Venetian Republic created a wide and well-functioning informative web composed by diplomatic, spies, travellers and businessmen that updated Venice with the several data and information collected during their travels and their stays abroad. The interest that Venice posed in the creation

[37] Ibidem, p.110
[38] Ibidem, p.57
[39] Ibidem, p.73
[40] Ibidem, p.74

of these kind of modern database were primarily for self-protection, but, on the other side, for an indirect protection. Sharing its knowledge with other commercial powers represented a double advantage. Firstly, it indirectly protected Venice from the possible contagion by inducing other trade partners to prevent and act wisely to counteract the spread of epidemics. Secondly, as reported before, it was seen as a sort of business card, highlighting the commercial and trade hegemony played by the Venetian Republic in that period.[41]

An interesting aspect is that, in that epoch, to have a well-structured and well-functioning preventative and administrative system was seen as a business card for the port cities. In fact, the consciousness that affairs were dealt with commercial powers able to grant continuity and stability thanks to their efficient and effective "public health measures" and, furthermore, offering comfortable structures where foreign travellers had forcedly to stay in case of health suspects, where one of the main aspects evaluated abroad. For example, for the non-voluntary guests, the forced stay in the lazarets were also possible to be seen as an opportunity to create new networks and to share information, so, those periods of quarantine where considerable as a sort of meeting point where, despite the risky conditions, information and knowledge were shared among people coming from different cities and societies.

Continuing, it is interesting to highlight the direct link between economic power and the several advancements in public health management. The riches from the flourishing trade were in part directed towards fostering public health management, which in turn, as mentioned earlier, lent lustre to the Venice good name, promoting trade as an indirect consequence.

Despite its economic decline starting from the Eighteenth century, the Republic had always played a leading role in the commercial sphere. With its accurate and forerunning provisions and health management procedures, Venice had always been followed by the other major port cities.

[41]Ibidem, p.39

With the objective of increasing the power of the Republic in fighting and preventing epidemics and health diseases, a kind of encyclopaedia had been created in order to collect all measures, both of political-administrative and technical-medical order, found effective in the past in order to deal with epidemics. The so-called "*Rubrica delle leggi del Magistrato eccellentissimo della Sanità*", has been created by Giovanni Antonio Boncio, starting from the second half of the 1700. In order to make it easily consultable, "*La Rubrica*" was subdivided by subject, from contumacies to the management of the poor social classes, from treatment of infected goods to cemeteries organisation. A sort of modern database designed to allow an easy and effective consultation in case of necessity.

Moreover, one of the main aspects to continue maintaining its leading role was the distribution of the so-called "*Terminazioni*" in the principal Mediterranean ports. Those publications where decisions taken by the Republic about public health management, and in order to maintain its leading role, those documents were distributed and shared with other port cities, in order to maintain a fundamental advantage in what today could be defined as an "*information management*" activity. Having an informative advantage meant to be able to guide commercial, political, social and trade decisions of the other commercial partners and, above all, of the rivals. At the same time, usual was the diffusion of wrong information, through which other cities were blamed to be responsible of bad management, inefficiency and non-effective power over their territories. These slanders, often invented or exaggerated for the mere purpose of damaging other commercial powers, were very effective, as no trading partner would have continued to negotiate with inefficient administrations that, above all, could have brought contagion within the city walls through the exchange of items and the contact with foreign merchants.

> "*Words, as [the Republic legal and theological advisor] Paolo Sarpi knew, were powerful weapons […], but, as he also knew, weapons are easily taken up, but laid down only with difficulty, and wars begin in one place, but end up elsewhere*".[42]

Disinformation, in fact, had a key role in this epoch. What nowadays can be called fake news, in the past consisted in the creation of disinformation used to damage the rivals or,

[42] De Vivo, F. (2007): Information and Communication in Venice: Rethinking Early Modern Politics, Oxford, *Oxford University Press*, pag.258

better, to make stronger own proper position, ideas and opinions. In the Venetian context, it is possible to cite the worries of merchants and traders about the possible stop of their trade due to the risk of contagion. The city administration used to close the ports of the city at the first risk of contagion. One of the clearest definitions of disinformation is "*intentionally constructed narratives, helpful in times of crisis and in governance, to pursue political goals both internally and internationally*".[43] Information, such an extremely valuable and intangible asset was, and is still today, able to create and damage the international image of a government.[44]

While in the past, information management activity was mainly directed to the "*Conservation of the population [that,] intended as the preservation of collective strength and not as a precursor of individual health rights […] became one of the central responsibilities of the State, hence the close attention it paid to precise information on demographic trends and the establishment of health control institutions to protect State resources, whether commercial networks or the population itself*",[45] nowadays, after the development path undergone by the concept of public health, have several facetings aiming at increasing the centrality of the citizen and of its rights. To have the humankind wellbeing at the core of the political agenda several decades had to pass. In the early modern age governmental instruments were merely used in order to collect data and information, immaterial goods that could be sold to other port cities, or, more usually, that could be used in order to increase importance and leading role internationally. To be a leading actor in the public health scenario meant at the same time to play a leading role also economically and politically, and to better evidence this link, it is possible to cite the shift of power from Venice to Livorno, port city that despite not being in the North Adriatic region, well represent how economic power shift affect public health administration among commercial powers in the analysed epoch.

Once Venice lost its commercial hegemony, other free ports, and prominently the above mentioned port city of Livorno, emerged as new laboratories where public health

[43]Delogu, G. 2022. Conflicting narratives: health (dis) information in eighteenth-century Italy. In *Past and Present*, Supplement 16, p.295
[44] Ibidem, p.298
[45] Ibidem, p.298

measures were developed and news and information were collected and shared. This shift led to a deep change within the European context public health management equilibrium. Here it was clear that "*Economic interests were central in shaping responses to epidemic threats, but they had to coexist with political, moral and social imperatives*".[46]

As reported before, what could be used as a commercial strategy was public health disinformation. With the Venetian decline, other port cities started to increase their power. With the increasing role within the public health sphere, also the commercial one increased, since commerce with free and safe ports was preferred to trade with unknown port cities. Furthermore, the medical knowledge was shared in all the Mediterranean, and this led to a strong reputation in an international relations perspective.[47]

Accordingly, "*health concerns [could be used] as weapons of economic competition*", and to increase or damage reliability and, consequently, affecting trading power of other port cities.[48]. Who governed information had a huge power able to grant hegemony in the economic, commercial and political areas, concept valid still nowadays.

Furthermore, the creation of false information and the adoption of different communicative styles were powerful instruments to convey messages able to create shift of credibility and power. Within this scenario, as reported before, "*Merchants and diplomats played a fundamental role […] by contributing to a more systematic collection of information, and by stimulating subsequent scientific and moral reflections*".[49]

Other aspects relating to the information management sphere, and that still today can be considered modern, but that started being considered as fundamental already in these years, are prevention and communication. As reported before, information management was, and is still today, important for the strategical advantage that could guarantee to the leading actor, in this case, the once Venetian Republic. Talking about prevention, it is interesting to cite Daniele Dolfin, "*Provveditore General da Mar*", who defined, during its guidance, some guidelines that had to be applied to the territories he governed. Dolfin

[46] Ibidem, p.300
[47] Ibidem, p.313
[48] Ibidem, p.314
[49] Ibidem, p.302

not only claimed that "public health" was the "*jus supremo*", that means, paraphrasing his words, that public health had to be posed at the top of the political agenda, but he also gave a clear idea of the importance of prevention. By evidencing two aspects, "*male*" and "*pericolo*", he gave a sort of guidelines. In a situation of danger, so, when there was a real risk for the contagion to affect the city, several preventative measures were prescribed to be actuated in order to stop or at least to limit the disease spread. Instead, in a situation of "*male*", so, when the contagion effectively arrived in the city, rapid actions were prescribed, in order to limit the damages. In that case, three structures had to be rapidly activated: a "*lazzaretto degli infetti*", to host the infected citizens, a "*lazzareto dei sospetti*", to host the citizens that were suspected to be contagious, and a "*luogo di rispetto*", dedicated to the medical personnel employed in the first two structures.[50]

While dealing with prevention and communication, it must be noted that the several advances in medical and scientific fields revealed that certain medical measures, despite thought fundamental in the fight against epidemic spread, were indeed useless. Letters and goods, which were considered to be one of the main sources of contagion, were subjected to a meticulous sanitisation process.[51] With care not to make them illegible, these letters were perfumed with vinegar, placed in the open air, exposed to the sun and many times the stamp that sealed them was removed and replaced with a new one. Once completed this sanitisation process, to those letters were applied a stamp that reported two types of letterings: "*netta di dentro e fuori*", so, clean out and inside, or "*netta di fuori e sporca dentro*", so, clean outside and dirty inside, depending on the type of sanitisation applied to the letter. With medical and scientific progress, it become clear that many of these procedures revealed to nothing but an enormous expenditure of resources and energy.[52]

[50] Delogu. G., 2022. Inventare la sanità pubblica in età moderna: Venezia e l'alto Adriatico. *Edizioni Ibis*.
[51] Ibidem, p.87
[52] Ibidem, p.102

1.4 A changing approach in the Venetian Public Health administration

Interesting to analyse are the different approaches that those appointed to regulate public health management in the Serenissima, the so-called "*Provveditori alla Sanità*", adopted through the years. In the first years of their activity, they adopted mostly a repressive approach, evidencing that the main purpose of the new institution that they represented was to control and regulate eventual epidemics in order to protect the regularity of commerce and trade.

In the second phase, between the sixteenth and the seventeenth centuries, more importance has been given to the role of prevention. Those appointed to manage public health understood that the best way to act against invisible enemies was to prevent the contagion acting a series of preventative measures, such as issuing and checking "*patenti di fede*" and "*patenti di sanità*", limiting trade and commerce from and toward suspicious cities and creating structures that had to be activated in case of suspicious of contagion.

The third and last phase, developed from the second half of the seventeenth century, saw the increasing role played by prevention and cure, thanks also to the advancements of science and medical knowledge. So, starting from the eighteenth century, public health was not anymore characterised only by prevention, but also by cure and assistance to the lowest categories of the society. The concept that the poorest and the ill were the weaker part of the population, and that through them the contagion could spread also to the more wealth ones, led to a change of the focus of the administrative powers. The Republic, through its health institutions, started to give increasing attention to those population strata, directing to them more efforts, resources and political measures in order to protect the wealthier citizens. Following this path, between the eighteenth and the nineteenth century, the concept of public health widened, increasing even more its role and its pervasiveness within the daily routine of the citizens. Science started to be seen fundamental, but the societal context in which people lived increased its importance within the public health scenario.

One of the main supporters of this vision, so, that public health had to be considered more as a science, with environmental, social and urban context playing a fundamental role in public health measures, was Johann Peter Frank, director of the main hospital in Wien. He claimed that in order to implement health, public health and wellness, one of the main aspects to be considered is the context, being particularly aware that the poorest, due to the unhealthy conditions in which they live, are one of the main causes of contagion diffusion. Frank was strongly convinced that it was necessary to implement public health in order to make it an "*universal science, a defensive art, a doctrine in order to protect humans and animals*".[53] Adopting this perspective it is clear that what was advanced was the idea of a wider public health management. It must not only be bound to the management of epidemics and surveillance of the poorest and marginalized citizens, but it must also deal with information management, attention to food security and nutrition, healthy air and water, housing and urban planning, all concepts that are certainly still today of primary importance.

It is interesting to observe how this definition provides a sort of historical path that the concept of public health has effectively followed. The roles and functions played by public health are several and different. For example, provisions of public health could be used also to regulate migrations. The provision of 1805 from Capodistria to Parenzo were used to regulate, or better, to avoid the emigration of specialized workers to other countries. So, a strategic policy implemented by the application of public health measures. Fundamental instruments used for the implementation of those policies where the police, which, in this case, has been used nor in a repressive way, nor for the prevention of social and sanitary aspects.[54]

It must be underlined that the intertwining of medical and social perspective was possible only through a well-endowed informative system. As reported before, port cities where an information hub, where news, data, information and knowledge were shared among those, coming from all over the world, stayed in the city. The role that scientific knowledge and information management had in Venice is proved, for example, by the

[53] Ibidem, p.81
[54] Ibidem, p.83

central role that the Serenissima had in the debate about the inoculation of smallpox vaccine. Smallpox vaccine first inoculation in Venice has been done in 1768. This first inoculation in Venice has been widely reported in the press, and, following its success, the Health Magistrate established two annual inoculation sessions starting in 1769, evidencing again the increasing role that prevention and cure played in Venice.

1.5 Public health and hygienic regulation

The dramatic effects of the plague epidemic that hit Europe during the fourteenth and fifteenth centuries represented a sort of engine in the public health management transition process we still benefit nowadays. The unpreparedness of the epoch made it clear that an invisible threat such as a plague outbreak could represent a catastrophe for an entire continent, with any respect for the national borders. The necessity of the creation for an administrative machine able to counteract the diffusion of epidemics became clear, and this development have been reached with different implementations in the public health management administration. For example, passing from temporary public health institutions to permanent ones, developing collective measures to fight against outbreaks, with progresses in public health regulations, such as implementing new organisations and projects in public hygiene and in sanitary and social organization[55] that represented a true keystone for the society of the epoch.

As will be analysed below, also analysing two documents coming from the modern age Venice, one focused on the medical aspects, the other focused on the violation of public health measures by a Venetian citizen, overpopulation, the uncontrolled living conditions of the population, in particular of the most fragile social strata such as the poor and the destitutes, the unmanaged situation relating to waste, air and water quality and the presence of rats and fleas, revealed favourable factors for the development of contagion.[56] Furthermore, modern age was the first period during which trade started to be qualified

[55] Ibidem, pag.48
[56] Brogi Ciofi, M., 1984. La peste del 1630 a Firenze con particolare riferimento ai provvedimenti igienico sanitari e sociali. Casa Editrice Leo S. Olschki s.r.l., *Archivio Storico Italiano*, Vol. 142, No. 1, pag. 47.

as international, with goods and people coming from other continents, with new kinds of products being traded in high quantities, and goods, people and information moving through borders increasing the diffusion of knowledge but, at the same time, favouring the diffusion of new illnesses and diseases.

The absence of any type of awareness about the risk that this type of uncontrolled international trade could represent for such unready port cities, not only from a hygienic and sanitary perspective, made it clear the risk that an epidemic could represent. Uncontrolled social contexts and poverty, being so diffused in the past, favoured the creation of drastic situation that, accompanied by an uninterested government, led to the creation of a fertile social soil within which illness and disease could prolifically expand, highlighting the strong correlation between famine, poverty and disease diffusion.[57] Bad living conditions, with any attention given to the sanitary aspects, revealed a fertile soil for the spread of the plague.

Some fundamental advancements reached through the efficient responses asked by the dramatic situation brought in Europe by the plague was the birth of the concept of public health international cooperation and the abandonment of the idea that the care of the poor, the destitutes and the sick had to be entrusted almost exclusively to religious organisations and to the handouts given to them by the wealthy classes. In the past the assistance to the care for the sick and destitutes was in fact considered to be task of religious organisations, but as time went on, and the public health situation became dramatic following the plague that pervaded Europe, it started to be clear that it was the State that had to organise an administrative machine entrusted with public health issues. It was understood that care of the lower classes was a state duty, that had to be implemented not only from a financial and medical point of view, but also through the implementation of hygienic and sanitary policies aimed at preventing the spread of disease and decay in the cities. Example of effective measures are the progresses achieved with regard to the cleanliness of the cities, water management and removal services.[58] The continuous threat posed by the increasing plague epidemic made it clear the need to develop administrative offices focused on the

[57] Ibidem, pag.48
[58] Ibidem, pag.50

management of public health. Those administrative bodies, called "*Uffici di Sanità*" in the *Serenissima*, started to be founded also in the other port cities of the epoch.

Interesting for the evidence they provide about the importance of such institutions are two documents coming from the Jewish Ghetto in Venice concerning the indirect damages caused by the plague. The first document is a report by a Jewish doctor living in the Venetian ghetto, Joshua Cabiglio, while the other one is a complaint lodged by the religious leaders of the Venetian Jewish community to denounce a plague spreader. Those documents both provide evidence of the so-called indirect damage caused by the spread of the plague. The Jewish community in Venezia, in fact, had been severely affected economically by the slowdown in trade due to the spread of the plague.[59]

The paper presented by Cabiglio suggested for the creation of a team of doctors specialising in the management of the plague pandemic. He argued that the work of non-specialised doctors was ineffective in combating the spread of the plague, asserting the necessity for a team of specialists who could manage the plague, from its prevention to its treatment and to the isolation procedures of plague victims.[60] Reading Cabiglio report it is interesting to note its proposal to organise and offer a new type of medical equipe to whom he refers to as: "*Illustrious and excellent Provveditori and Sopraproveditori alla Sanità - Your humble servant Josua Cabiglio Hebreo - 29 October 1630*"[61]

I would like to evidence some of the main passages of his health-report in which he enunciated his ideas regarding the establishment of a new team of experts, a revolutionary idea for the time. Praising the reputation of the city of Venice, both from a theoretical point of view, with its numerous studies and achievements in the medical field, and from a practical point of view, the doctor, using a highly polished vocabulary, invited the *Provveditori* and the *Sopraprovveditori alla Sanità* to think about the necessity of using

[59] Boccato, C., 1975. Testimonianze ebraiche sulla peste del 1630 a Venezia. *La Rassegna Mensile di Israel*, Settembre - Ottobre 1975, terza serie, Vol. 41, No. 9/10 (Settembre - Ottobre 1975), pag. 459.
[60] Ibidem, pag. 462
[61] "Illustrissimi et eccellentissimi Provveditori e Sopraprovveditori alla Sanità - Il Vostro Humilissimo servo Josua Cabiglio Hebreo - 29 ottobre 1630". Source: Boccato, C., 1975. Testimonianze ebraiche sulla peste del 1630 a Venezia. *La Rassegna Mensile di Israel* , Settembre - Ottobre 1975, terza serie, Vol. 41, No. 9/10 (Settembre - Ottobre 1975), p. 464.

a medical team that boasted "*una longhissima pratica et esperientia di certo di molti anni, vedendone in diversi luoghi e per diferenti modi*", that means, "*a very long practice and experience of many years, having seen [this type of disease] in different places and of different kinds*". He continued claiming that a team of experts who have already dealt with such situations is needed to treat an illness of this size. While the renowned and experienced Venetian doctors were the best at treating ordinary illnesses, he emphasised the extraordinary nature of such an epidemic, which required experience and acquired practices to cope with and defeat it. I will continue quoting some of the key passages from his report:

"[....] However, it is not to blame the Most Excellent Gentlemen Physicians if they do not also perform their miraculous cures in this case, because not having seen this illness in this City since 55 years, it is not surprising that those who have never seen it, do not know it and do not know how to cure it, because the blind man of nativity does not judge colours. I therefore, Josua Chabiglio, your humble servant, who through long and various journeys made have seen and practised many places where the plague was found, and have seen countless people being treated in different ways according to the quality of the subjects, places and times, offer to bring to this City, within about 40 days, twelve men [...] with six servants or "menistri". [...] The quality of those twelve is miraculous, [...] men who are very expert in this disease [...]".[62]

Of different origin is the second document, which instead, is a denounce issued by the religious leaders of the Venetian Jewish Ghetto, denouncing Iseppo Ferrach, responsible to have not respected the restrictive measures applied to whom, as him, was infected by the plague. Moreover, he did not communicate its contagion and also, he did not send his possessions to have them sanitised as prescribed by the law. He also did not respect the prohibition of other people entering his house in order to limit the spread of the contagion.

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[62] *"[....] E però non è d'incolpare li Eccellentissimi Signori medici se non fanno ancho in questo caso le sue miracolose curationi, percioché non l'avendo visto in questa Città di questo mal di quando 55 anni, non è da meravigliare se quelli che mai l'hanno visto, non lo conoscino e sappiano medicare, percioché il cieco di natività non giudica i colori. Io dunque Josua Chabiglio, vostro minimo suddito, che per lunghi e diversi viaggi fatti da me ho visto e praticato molti luoghi dove si trovava la peste, et ho visto medicar infinite persone e per diversi modi secondo le qualità dei soggetti, luoghi et tempi, mi offerisco a far venir in questa Città, in termine di 40 giorni in circa, dodeci huomeni [...] con sei garzoni o menistri. [...] La qualita de quelli dodeci e miracolosa, [...]huomeni peritissimi in questo mal[...]. Source:* Ibidem, pag. 465.

Again, once been cured, he was charged with caring for a plague victim. When the patient died, he took possession of her clothes to sell them.[63] I report some of the main passages of the denounce:

"Illustrissimi et Eccellentissimi Signori Provveditori e Sopra provveditori alla Sanità. It is never possible for this city to be freed of this plague until the transgressors and evil-doers are severely punished, as there is a certain Iseppo Ferach known as Beuceze, a Jew, who lives in Getto Vechio, who was wounded by the plague and seized by the Presidents of Getto. [...] Those Presidents of Getto had a proclamation and excommunication that all those who had been seized and had possessions seized, had them to come and give notice, to be then sent to the aforementioned Lazaretto di Santa Crestina. Despite the aforesaid proclamation, the before mentioned Iseppo was so reckless that in defiance of the public proclamations of Your Excellencies, as well as those of the Jews, he did not want to make anything known, nor did he want to send any kind of goods from his house, that was all sick, to the aforesaid Lazaretto to be disgorged [...] Furthermore, in order to harm humankind with a little love of the Lord God and contempt for justice, he has made it lawful to host any person in his house [...]. Item, after the above-mentioned was healed by the plague, [he was instructed to] go and govern a person in the house of Isach Namias, who was wounded by the plague and after the death of the said sick, this Iseppo robbed and took away some belongings, which were seen to be taken away. [...]".[64]

[63] Ibidem, pagg. 463-464

[64] "*Illustrissimi et Eccellentissimi Signori Provveditori e Sopra provveditori alla Sanità. Non è mai possibile che questa città resti liberata di questa opressione di questo mal di peste sino che li eniqui trasgressori e mal operanti non restino severamente castigati, come vi è un tal Iseppo Ferach detto Beuceze, hebreo, (che) abita in Getto Vechio, (il) qual è stato ferito di peste e sequestrato per gli Presidenti del Getto. […] [D]etti Presidenti di Getto feceno far grave proclama e scomuniche che tutti quelli che erano stati sequestrati et avevano robbe afetate, li havessimo da venir a dar in nota, per esser poi mandate al sopradetto Lazzaretto di Santa Crestina. Onde che al sudetto (proclama), Iseppo sopradetto è stato si ardito e temerario che in sprezzo alle pubbliche proclame sia di Vostre Eccellenze, come di quelle delli hebrei et schomuniche, non ha voluto niuna cosa manifestar, né meno mandar niuna sorta di robbe di detta sua casa, (la) qual era tutta afetata, al sudetto Lazzaretto per esser sborata […] [Inoltre, finendo]per danneggiar il genero humano con pocho amor del Signore Iddio et sprezzo della Giustitia, si è fatto lecito pratichar ogni persona in detta sua casa […]. Item, doppo esser il suddetto risanato della ferita di peste che haveva, [fu incaricato di] andar a governar una massera in casa di Isach Namias, ove andò, (la) qual era ferita di peste et doppo la morte di detta massera, questo Iseppo li robbo et porto via alquante robbe, quali li furono viste portar via. […]".* Source: Ibidem, pag. 467

A brief view to the measures adopted by another important city of the epoch are those implemented in Florence, where in 1378 the "*Octo Custodie*" has been established as a police department with political police powers. To this department were assigned the public health decisional measures, but, due to the increasing threat posed by epidemics and plague, in 1527 and till 1778 in Florence has been created a public health dedicated institution, a permanent "*Magistratura*", fully committed to public health management. The path from a temporary to a permanent institution highlights the awareness process undertaken by the political powers in the Italian peninsula of the epoch. Furthermore, it is clear that the diffusion of plague represented a starting point that made it necessary the creation of permanent public health management institutions, which duration shifted from a short temporary one to a permanent one. This led to the creation of a capillary institutional structure, with a decentralised administration, but always depending on a central and principal headquarter in the capital. From the work of those institutions come several guidelines that still today are applied. Some of those are the necessity to update health institutions in case of contagion, and the consequent respect of isolation measures and sanitisation procedures.[65]

In conclusion, this paragraph is dedicated to the analysis of public health measures implemented in the modern age Venice, with a short digression on the similar measures adopter by the coeval Florence, in order to evidence how already in those years the idea of an active role of the government started to be recognised, with a special focus on urban hygiene and on the protection of the most fragile social strata.

1.6 Public space management

Being clear the importance of the public health management in order to favour commerce, the quality of life and the prestige of Venice, several administrations, with the objective of guiding strategic areas of the city, have been established, such as the Magistracy with

[65] Brogi Ciofi, M., 1984. La peste del 1630 a Firenze con particolare riferimento ai provvedimenti igienico sanitari e sociali. Casa Editrice Leo S. Olschki s.r.l., *Archivio Storico Italiano*, 1984, Vol. 142, No. 1 (519) (1984), pag.56

maritime responsibilities (1281) and the Magistracy of Waters (1501), both dealing with sea routes.[66] The establishments of those administrative bodies highlight the importance of water canals in Venice, both from a communicative and environmental perspective. Minding the second one, city's authorities issued regulations about the confinement of some noxious activities and productions far from the city centre, the most densely populated area of the city. For example, tanners had been moved to the Giudecca Island, glass factories in Murano, commerce in Rialto and ship building in the Arsenale. Similar public health provision was that of the Health Office decree of 1657, that provided for boat carrying rubbish to exercise their activities only in the night, in order to limit the nuisance caused to the citizens by bad smells.[67]

Once analysed some medical and legislative aspect regulating daily life during the pandemic, another focal aspect that is possible to consider as fundamental while talking about public health is the management of public space. Being a chaotic city, animated by merchants, travellers and any other type of person, the Venetian administration already in the modern age understood the necessity to control the movement of goods and people within its borders, the regulation of the location of certain ethnic and social groups, and the environmental and health situation in Venice.[68] I would like to report some of the words of Alexandre-Touissaint Limojon de S. Desdier, French nobleman who spent three years in Venice, from 1672 to 1674. He reported that "*Drawing on documents produced by the Venetian state — decrees passed by the Senate, the main executive body of government, and by state magistracies, especially the Provveditori alla Sanità, the city's Health Office — I will argue that a key inspiration was the desire to promote the health of the city. […] [T]he diversity of the people who lived in, moved to, and passed through the city. This diversity played a major part in anxieties about health due to the belief that outsiders brought disease into the city. Yet the Venetian state was eager to accommodate these outsiders in order to support their involvement in commercial activity. […].*

[66] Ibidem, p.179
[67] Ibidem, p.179
[68] Bamji, A., (2007) The Control of Space: Dealing with Diversity in Early Modern Venice, *Italian Studies*, 62:2, p.175

The social life was also regulated through ethnic and commercial divisions. While Turks and Germans had to stay in houses called "*Fonteghi*", buildings dedicated to host these ethnic groups, Jews were limited to an area of the city called "*Ghetto*".[69] One of the main reasons that moved the city administration to act such social divisions, in this case religiously motivated, what the strong conviction of the epoch that one of the most important public health aspects was "*collective spiritual health*".[70] Religious contamination could represent a threat from a social, and so, from a public health perspective. Such belief was strongly linked to the idea that foreigner represented the main vehicle of contagion, both physical and spiritual. Over the centuries, the continual entry of new ethnic minorities into the city represented a common thread in the fear and threats of the spread of new pandemics. In the fifteenth century the risk was posed by the Slavs and Albanians, in the sixteenth the Marranos, while in the seventeenth century by the Turks. In a statement of the Health Office of 1661 is reported: *"It has come to the notice of the Most Illustrious Gentlemen above the Sopra Proveditori and Proveditori alla Sanità that the Turks, who from time to time come to this City, instead of taking up residence in their own fontico, are staying in the habitations of particular Catholics, with serious disorder contrary to the right intention of the Prince, with harmful confusion of rites, with danger to health, and with opposition to the government will".*[71]

In order to control the entries of Turks in the city, the government imposed the possession of the "*bollettino*", a document reporting the general information of the possessor and the place where he intended to stay. Moreover, strongly regulated were the lodging houses, usually guesting foreigners during their stays in Venice. Another social group that has been strongly pointed to be a threat for public health were poor, to which was prohibited to stay in lodging houses due to the threat they represented.[72]

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[69] Ibidem, p.180
[70] Ibidem, p.180
[71] *"Essendo pervenuto à notitia dell'Illustrissimi, et Eccellentissimi Signori Sopra Proveditori, e Proveditori alla Sanità, che li Turchi, che di tempo in tempo capitano in questa Città in vece di portarsi ad habitare nel loro fontico si tratengono in habitationi de particolari Catolici con grave disordine contrario alla retta intentione del Principe, con dannabile confusione de riti, con pericolo di salute, et con oppositione al politico governo".* Source: Ibidem, p.182
[72] Ibidem, p.182

In conclusion, it is clear the vision that Venetian administrative bodies acted in this epoch. Public health was granted mainly by posing boundaries, in order to organise the environment and create a division of space, by limiting social groups, poor and ills in different areas of the city.[73]

1.7 A wider framework of public health administration

As reported before, sanitary policies in Venice were strongly politicized. Their purpose was not only to protect public health in the Venetian domains, but also to regulate commercial paths in the Mediterranean. Being Venice the bulwark of sanitary policies, every port city followed the indications coming from the Serenissima, and if a port was considered unsafe by Venice, it was considered unsafe also by the others. An unsafe port could not trade anymore, and this represented a huge threat for its economic survival.[74] Despite the fact that the main idea was that health policies represented a risk to the normal rhythm of economic flows, it was precisely that that ensured their continuity. To be implemented, these sanitary regulations have to be made respected, and it was possible only through a strong military presence. Underlining the reputation of the Serenissima's sanitary policies is a phrase uttered by the Venetian health authorities during the outbreak of the plague in Marseille in 1720. They were more concerned about the spread of disease by land than by sea, since the control of the seas was entrusted to the diligent Venice. The control of trade by land instead, was required to others, and this signified that Venice had to "*confidare […] nell'altrui diligentie*",[75] that means to rely on the diligence of others. In the same way, when the Venetian power started to decrease, *"[..] I legni minori di qualsiasi condizione [navigavano] con libertà [e senza alcuna] licenza [da parte della Reubblica]"* that means that even the most insignificant vessels sailed without complying with the Serenissima's regulations.[76] Venice understood that cooperation with other

[73] Ibidem, p.187
[74] Andreozzi, D. "L'anima del commercio è la salute". Sanità, traffici, rischio e dominio sul mare in area alto adriatica (1700-1750), pp 228-229.
[75] Ibidem, p.231
[76] Ibidem, p.232

European states was essential for an effective health policy, but the latter were no longer willing to submit to laws dictated by a former power.[77] This shift of power led to important political challenges. From the second half of the eighteenth century onwards, Venice began to adopt a softer approach to foreign powers. For example, starting from 1752, Venice reached an agreement with the Habsburg Empire. Once the measures had been issued, Venice had to send them to Wien. The measures were subject to the control of the Habsburg authorities, which, if deemed necessary any changes, questioned them in order to make them amended through a mutual agreement between Venetian and Habsburg authorities. This softer approach was so successful that it was also replied relatively to the relations with the Papal State from the following year.[78]

The Venetian approach to the management of public health was innovative, in the way it "*prioritized social control and public order over prevention and care*".[79] The novelty proposed by the Venetian administration was to reach the final aim of public health protection through the cooperation of different disciplines. While medicine, politics and social life administration were seen, until this point, as concerning different areas, Venice proposed a change of perspective,[80] proposing an interdisciplinary approach which, with a good management of information, could effectively control the public health situation.

The key role of the port cities in health management has been renewed again during the eighteenth century, when, with the exponential increase of trade and commerce, increased in the same way the necessity of being constantly and regularly updated with news and information about other commercial powers.[81] A new perspective started to be adopted by the society, that is, that public health must not be any more served at the mere objective of preservation of commerce, but it must spread its utility to the protection of the quality of life of the citizens. Adopting this new vision, the necessity of updated information increased, and a new type of strategic market born. Particularly relevant was the

[77] Ibidem, p. 243
[78] Ibidem, p.245
[79] Scaramella, T., Medicina e giustizia nell'amministrazione della sanità: la Repubblica di Venezia. *Studi Storici*, 3/2023, p.1
[80] Ibidem, p.2
[81] Delogu, G., 2018. Dopo Passarowitz: commercio, informazione e sanità pubblica fra l'Adriatico e il Tirreno, pp. 219-220

communication network created in the eighteenth century among Venice, Livorno, Trieste and Marseille, focused mainly on epidemies. Seen as a positive novelty for the management of public health, it cannot be denied that it had also several negative aspects. For example, rivals created disinformation against other cities, in order to create an unsafe and unreliable perception of their rivals to limit their commerce. Furthermore, the collection of information by the statal administration signified and increasing active role of the state in the commerce, representing a threat for some merchant that seen it as an unfair intromission.[82]

Changing briefly perspective and looking at the port city of Triest, the first to regulate the collection and publication in such a format, tables on pre-printed sheets began to be used in Venice as well, between 1835 and 1847. Those tables, called "*Portate",* were compiled with data from other cities and then published in order to inform the population.[83] In addition to these so-called "*Portate*", manuscript journals began to circulate, reporting news from other cities, not only from a sanitary point of view, but also from a political, economic, and international relations perspective, such as about the beginning of new wars or the achievement of peace.[84]

These information collection and publication activities evidence how prevention and cooperation in sanitary field were found to be some of the real solutions to limit the diffusion of epidemics. Furthermore, from the point of view of scientific progress, thanks to the dense exchange of information that have always provided, Venice can be considered a strategic and fundamental place for the achievement of numerous medical and scientific advancements. [85]

[82] Ibidem, p.221
[83] Ibidem, p.223
[84] Ibidem, p.218
[85] Ibidem, p.227

1.8 An increasing governmental action

It is possible to observe a positive correlation between the increasing role of the State and the developments of new public health initiatives. Daniele Andreozzi supports the idea that different approaches to public health were depending on the governmental, political, and cultural aspects of the society they were developed in. For example, in his work, he reports that: "*The health policies of the Republic had been shaped within the mercantile logic of Venice [...] strengthening at the same time the [economic] supremacy of the Republic.*"[86] This highlights how the Serenissima modelled its sanitary provisions giving priority to the commercial interests that wanted to protect. Through the implementation of its defensive system, with "lazarets, quarantines, procedures of ventilation and handling of the goods"[87], Venice has been able to limit the spread of epidemic, while, at the same time, preserving its political and commercial interests. From the political point of view, for Venice, in order to maintain and increase its hegemonic role in the international economic sphere, it was essential to play an active and primary role in the protection of public health. Vesting a leading role was fundamental, but in order to do that, huge amount of power and resources were necessary. Venice wanted to play a pioneering role, or better, as Andreozzi reported in its paper, Venice wanted to "*define itself [as] [t]he Barbican of Europe, claiming its ability to defend the continent especially from the epidemics that were approaching from the Levant and Balkans, by sea and by land".*[88]

Bearing in mind the importance of the political, economic and socio-cultural context within a society in relation to the applicability of policies to protect public health, it is interesting to mention the administration exercised from 1731 onwards by Simone Contarini, the then General Governor in Dalmatia and Albania.[89] Contarini was instructed by the central Venetian authorities to stop the spread of the plague epidemic in the

[86] Andreozzi, D., 2015. The «Barbican of Europe» The Plague of Split and the Strategy of Defence in the Adriatic Area between the Venetian Territories and the Ottoman Empire (Eighteenth Century). SIDeS, *«Popolazione e Storia*», 2/2015, p.118.
[87] Ibidem, p.118
[88]Ibidem, p.117
[89] Ibidem, p.122

territories he governed, and in doing so he adopted an approach that was aware of the needs of the society he governed. During the spread of the plague, Contarini realised the importance of providing support and assistance to the population, who could not stand and perish under the various measures implemented to protect public health. Those who were isolated were guaranteed with continuous supplies, medicines and religious assistance. Another key aspect he took care of was the collection of information, so that he could have a complete picture of the health situation in the controlled territories, and this information was shared with the central authorities in Venice.[90] As well as the protection of the human aspect, this choice was made primarily for strategic reasons to ensure public order. Andreozzi highlights this aspect reporting that *"[t]he availability of adequate resources to Contarini, also to support the local communities and the sicks, appears to have been an essential feature of the health policies, prompted by the need to ensure that those who had been involved in epidemic should not, out of desperation, flout or ignore the norms established by the authorities".*[91]

Again, for those who feared the reprisals of violent action and wanted to move to another city in order to escape isolation and other restrictive measures, *"[t]he Governor-General tried to make sure the inhabitants of the region had adequate spiritual, health and material assistance so that they would not move from place to place and thus spread the infection".*[92]

Again, with a focus on maintaining the regular rhythm of trade in the Venetian territories, Contarini prescribed that goods should not be burnt or, still worse, buried in order to evade health controls, only to be recovered and resold with the risk of creating a new outbreak. Accordingly, Contarini promoted the adoption of procedures such as ventilation and quarantine for the possibly infected merchandise.[93]

The institutional and administrative stability permitted by the hegemonic role played by Venice ended up when, during the Eighteenth century, Venice was not anymore the centre

[90] Ibidem, p.128
[91] Ibidem, p.128
[92] Ibidem, p.131
[93] Ibidem, p.133

of the political and commercial power in the Mediterranean. As new powers were rising in the area, it was necessary to re-draw the public health framework.[94]

Keeping the social perspective adopted before, it is possible to assert that epidemic in the modern age have contributed to the creation to the modern social welfare, and also, have represented part of a broader civilizing process.[95] In fact, the dramatic situation caused by the spread of the plague epidemic made necessary the active role of the State in the management of public health. Entrusting everything concerning the care and assistance of the sick to the charitable confraternities of the Christian Church was no longer sustainable. This awareness led in a way to the birth of public health.[96] Citing Enrico Brandi:

> "*If, for example, in Florence it began at the time of the plague pandemic in 1347 with "oficiali sopra a ciò ordinati"' and again in 1448 the contingent management of the health emergency was entrusted to the "Octo Custodie... magistratura.... with tasks essentially of political police", from then on we witnessed the advance of a process in the course of which not only in Tuscany but in almost all of central-northern Italy there was "the constitution of special health magistracies" that "initially had a temporary character of emergency" but whose "recurrence of epidemics... favoured the transformation into... permanent"; a "process" that led to the affirmation and stabilisation of a system articulated in "Magistrates... central magistrates located in the capitals of the various State*s".[97]

This short paragraph evidence how the continuous threat posed by repeating episode of epidemic made it necessary the creation of permanent governmental administrations with

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[94] Ibidem, p.121

[95] Brandi, E., (2022) Elias e la peste. Aspetti connessi a epidemie in età moderna, spunti per una lettura eliasiana, in «*Cambio. Rivista sul le trasformazioni sociali*», Vol. 12, n. 23: p.112.

[96] Ibidem, p.113

[97] *"Se, ad esempio, a Firenze «si cominciò all'epoca della pandemia di peste del 1347 con "oficiali sopra a ciò ordinati"» e ancora nel 1448 la contingente gestione dell'emergenza sanitaria fu affidata agli «"Octo Custodie"… magistratura… con compiti essenzialmente di polizia politica», a partire da allora si assistette all'avanzare di un processo nel corso del quale non solo in Toscana ma pressoché in tutto il centro-nord Italia si ebbe «la costituzione di speciali magistrature sanitarie» che «ebbero inizialmente un carattere temporaneo di emergenza» ma di cui «il ripetersi delle epidemie… favorì la trasformazione in… permanenti»; un «processo» che portò all'affermarsi e allo stabilizzarsi di un sistema articolato in «Magistrature … centrali localizzate nelle capitali dei vari Stati»".* Source: Ibidem, p.114

public health management duties. Such administrative interventions by the state were necessary, especially since in early modern age epoch the medical-scientific expertise was not such as to allow for meaningful solutions. It was therefore necessary to rely on social and administrative measures in order to prevent and limit the contagion.[98] Further than an action limited to the health of the citizens, those new permanent institutions were asked also to control and provide advices and regulations about food, poor, prostitution, hygienic conditions, medicines, sewers, hospitals, taverns and meeting places, travellers, pilgrims, ships and the keeping of registers with data on the health of citizens, showing the numbers of infected, cured and dead. It is clear that the risk posed by epidemics made the society of the time more aware of the necessity for the implementation of preventative policies, adopting a future-oriented vision.[99]

1.9 Public health measures in other cities

Annemarie Kinzelbach analysed the management of public health during the same period in German cities. Their small size certainly influenced the management, administration and solutions proposed to protect public health. Suffice it to say that the largest German city at the time, Augsburg, was roughly a quarter of the size of the largest Italian cities such as Venice and Milan.[100] The author evidences how due to the still quite developed medical and scientific knowledge, the main instruments to protect public health and limit the spread of contagion was to limit the entries in German cities of suspected goods and citizens and to regulate provisions about ventilation of goods and quarantine of the sicks. What could evidence the low medical preparation was also the use of terms such as contagion, miasma and infection. Despite the medical use of these terms, their meaning was not clear, and was still strongly associated with popular concepts. For example, the term infection was coined as something that could be transmitted from person to person,

[98] Ibidem, p.114
[99] Ibidem, p.115
[100] Kinzelbach, A., 2006. Infection, Contagion, and Public Health in Late Medieval and Early Modern German Imperial Towns. *Oxford University Press. Journal of the History of Medicine and Allied Sciences*, JULY 2006, Vol. 61, No. 3,p.389

something physical. Miasma, instead, was strongly associated with the idea of "*corrupted air*".[101]

The theory of corrupted air was so strong,[102] and the diffusion of contagion was thought to be linked to the living conditions of the poor, which were obliged to live in dirty houses often suffering of starvation and thirst. "*There was a growing association between plague and poverty"*[103]. Those opinions were strongly backed by some publications, such as in the "*De Contagione*" of 1546 of Girolamo Fracastoro.[104] Following those convictions, in some of the main cities such as Venice, Siena, Perugia and Parma, measures against the poor, city coffers, mendicants and lower classes had been implemented.[105] At the same time, exceptions were made for Ambassadors and wealthy travellers.[106]

> *"Fracastoro not only supported the legislators in their conclusion that the plague was contagious, he also agreed that it was a disease of the poor. His theory easily accommodated their reluctance to extend the full weight of plague controls to those of higher social station"*.

Such views, despite their negative sides, traced the first steps towards policies and theories of public health control with a vision directed to the social protection of the poorest classes.[107] The consciousness that the most fragile population strata represented the most dangerous vehicle for disease diffusion led to the creation of what can be defined as social medicine.

Despite in a different epoch, I would like to continue talking about the contributions of the German pathologist and politician Rudolf Virchow (1821 – 1902).[108] Virchow can be recognised as the father of social medicine. He has been the first to evidence the strong correlation between environmental and social factors affecting the prevention of diseases

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[101] Ibidem, p.370
[102] Carmichael, A. G., 1983. Plague legislation in the Italian renaissance. *The Johns Hopkins University Press*. Bulletin of the History of Medicine, WINTER 1983, Vol. 57, No. 4, p.509
[103] Ibidem, p.521
[104] Ibidem, p.522
[105] Ibidem, p.522
[106] Ibidem, p.523
[107] Ibidem, p.525
[108] Lange, K. W., 2021. Rudolf Virchow, poverty and global health: from "politics as medicine on a grand scale" to "health in all policies". *Global Health Journal*, Volume 5, Issue 3, September 2021. Pag. 149

and, furthermore, he has been able to draw a direct link between poverty and disease diffusion. His conclusions came from his direct involvement in the commission appointed by the Prussian government in 1847 to report the situation in Upper Slesia, a region of the Prussian Kingdom hit by typhus in the 1847-1848 winter. His report stated that "*The […] typhus epidemic was more a social than a medical problem and […] the improvement of such conditions and prevention of similar crises in the future could be achieved only through prosperity, education, culture and the elimination of social inequality*".[109] He stated that "*medicine is social science and politics nothing but medicine on a grand scale*".[110]

The innovative vision advanced by Virchow represented the starting point for the development of public health and also for the development of what today is called HiAP approach, that means "Health in All Policies". The concept of Health in All Policies emerged with the aim of promoting political action and long-term vision addressing social determinants of health (SDH). This concept was, and is still today, fundamental for the prevention of disease, the promotion of a healthy lifestyle and the reduction of factors deleterious to the health of an entire population.[111] Through those lenses, it is possible to view public health not only as a medical matter, but also as a concatenation of political, biological, social and economic decisions within a society. Prevention, so, has a primary role, intending the management of information and data and the development of administrative and sanitary practices as fundamental in order to prevent and manage the eventuality of epidemics.

To continue, *"Virchow's concept of "social medicine" addressed the environmental, social and economic aspects of illness*".[112] I want to highlight this aspect because it represents one of the first moves toward the creation of what we nowadays define as public health. Virchow understood that health, intended in a collective perspective, can be reached only through a systemic approach.

[109] Ibidem, pag. 150
[110] Ibidem
[111] Ibidem, pag. 152
[112] Ibidem, pag. 150

Further the revolutionary suggestions proposed by Virchow, his report can be considered as a first step toward the realisation of a welfare state, where the Government is considered responsible to grant the wellbeing of its citizens from all the different perspectives composing a society. Again, what is revolutionary is not only the new approach proposed, but also the conviction that the lower classes, where malnutrition, low education and poor living conditions are common, are the social strata where it is easier to detect illnesses and, so, fertile ground for epidemics outbreaks. Acknowledged this, "[*Virchow] worked on multiple public health efforts, including enhancing medical services for the poor, introducing vaccinations for children and implementing various sanitation projects*".[113]

With its observation, Virchow made it clear that medicine plays a central role mainly in the social field, and according to this conviction, started to see "*disease as an expression of individual life under unfavourable conditions, and epidemics as indicators of significant disruptions in the life of populations*".[114] Virchow proposed a kind of reform of medicine, placing social well-being at the centre of this science, thus moving away from mere physical well-being, which at the time was considered the only relevant factor. He identified a number of fundamental principles, including that physical well-being should be correlated with social well-being and that data should be collected in order to be able to obtain comparative standards. In addition, he proposed what was considered revolutionary at the time, namely the protection of the most vulnerable. He affirmed the need to protect women and children by prohibiting child labour and pregnant women labour, as well as deeming necessary the adequate ventilation of workplaces and the reduction of working hours.[115] So, in his vision, prevention played a fundamental role in public health, and prevention must be politically granted and reached, through an active role of the State

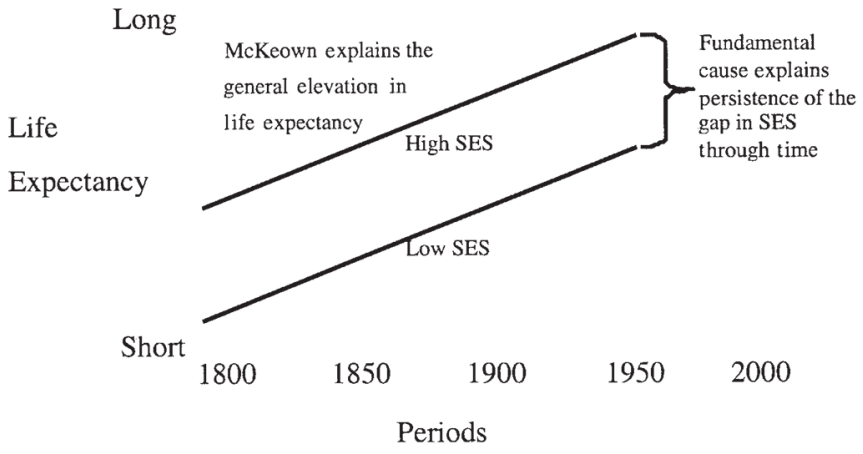
As it will be reported in the next chapters, wars, famine and other large-scale events characterised by unhygienic living conditions, poverty and malnutrition are often at the

[113] Ibidem, pag. 150
[114] Ibidem, pag. 150
[115] Ibidem, pag. 150

base of epidemic and other health threats. Social inequalities still today characterise the gap among different societies and, even worst, within the same society. Furthermore, the awareness that several medical initiatives need to be supported by the governments and need to have legislative backing in order to be effective, is ever more valid.[116]

I would continue the investigation of the link between the political agendas and social and public health spheres by changing perspective to another prominent author who emphasised the role of social conditions in public health, Thomas McKeown (1912-1988). British epidemiologist, his view proposes to see economic and social conditions as the main solutions that in the past two centuries have created better living conditions, so, not limiting the achievement of better living conditions to "*specific medical advances and public health initiatives*".[117] The words of McKeown have been paraphrased asserting that in the past*"[…] the rise in population was due less to human agency in the form of health-enhancing measures than to largely invisible economic forces that changed broad social conditions*".[118] Here again it is possible to find the issue of inequalities. Societies well-endowed of economic power will reach better standard of living compared to the less endowed ones.

[116] Ibidem, pag. 152
[117] Link, B.G., Phelan, J.C., 2002. McKeown and the Idea That Social Conditions Are Fundamental Causes of Disease. *American Journal of Public Health* | May 2002, Vol 92, No. 5, pag. 1
[118] Ibidem, pag.1



Note. SES = socioeconomic status. The diagram seeks to illustrate the issues and not to precisely describe actual patterns over time.

FIGURE 1—Illustration of differences between the problem addressed by McKeown and the problem addressed by the fundamental causes approach.

Source: Link, B.G., Phelan, J.C., 2002. McKeown and the Idea That Social Conditions Are Fundamental Causes of Disease. Pag.2

The graphic above evidence that, despite the persistency of the gap in socioeconomic status, human society has undergone an increase from a life expectancy point of view, thus partly invalidating McKeown thesis. What is focal is the two folded conclusion about McKeown thesis. While it has been proved incorrect his assertion that public health and medical progresses are not fundamental in increasing better living conditions, it is true that a main role is played by economic growth, without which none of the two-aspect cited before are achievable.[119] Again, the main conclusion that it is possible to detect analysing McKeown thesis is that public health must be considered under a systemic approach in order to be effective. Economic, social, environmental, medical and political agendas must cooperate with each other in order to reach the final and ambitious goal of an equal improvement of living conditions.

I would like to conclude this first historical chapter evidencing the first stages that have characterised the evolution path undergone by the concept of public health. In this chapter I have tried to highlight how, in the early modern age, public health was thought mainly as an administrative practice, implemented and pursued by the governments only to

[119] Ibidem, pag.2

protect their commercial, military and political interests. Focusing on the plague epidemic management in Venice, the capital of the Serenissima, it is possible to observe the several novelties proposed by the Venetian political elite, which through the establishment of permanent administrative and decisional structures, in the first case with the creation of lazarets and in the second one with the establishment of an Health Magistracy, has paved the way to an innovative process of health administration. Despite the creation of a new and innovative system of public health protection, the aim was still that of protecting the real power of Venice, so, trade and commerce.

In the next chapters, adopting a more political and social perspective, I would like to maintain the focus on the evolutional path undergone by the concept of public health. There, I would try to highlight the increasing consciousness about the centrality of the citizen, both as individual and as a member of a collectivity, that deeply modified the management of public health.

My final objective is that of proposing a systemic view of public health management, starting from a historical perspective, arriving to the present day, always maintaining an international relations and cooperation background.

CHAPTER 2: Legislative and social public health framework

2.1 Public health: between legislative and social development

The concept of public health has undergone deep changes over the past, and still today is experiencing a sort of development.

Public health is understood in its broadest sense for the purposes of this section. This second chapter will be focused on the legislative aspects that regulate the protection of public health in the various national, international and supranational levels, evidencing the numerous efforts undergone within the international scenario in order to increase cooperation and coordination among the different contexts. Attention will be also given to the social aspect of public health, evidencing its several aspects relating to the human rights sphere.

It is crucial to understand and appreciate the comprehensive nature of public health, particularly in the context of its collective dimensions. Incessant debates and protests in the international arena, that are vesting an increasing role in the international political agenda, are indicative of modern societies growing cognisance of the need to comprehend wellbeing in its systemic soul, and the concomitant rise in the significance of public health factors.

In this second chapter, the focus will be on the different legislative aspects that deal with the topic of public health, and the corresponding public health programmes and policies implementation. This topic is of particular concern to people, due to the wide number of subjects affected and due to the weight such an issue have on a daily basis within our societies.

Deepening the legislative framework, and focusing on the Italian context, article 32 of the Italian Constitution is famous for providing the protection of health, and, in particular, it is noteworthy also for its characteristic of emphasising the dual approach to health as both an individual and a collective right. The continuous amendment process characterising our institutional fundamental charts and national Constitutions represent

clear evidence of the ever-increasing power that citizenry is having within the political arena. Moreover, the numerous interventions, protests, and the increasing number of voices, that in the past were often ignored or, even worst, suppressed, represent a real sign of change in the actual way of legislating, evidencing at the same time the active role played by the citizens within governmental activities.

2.2 Public health protection in the Italian Constitution

Citing one of the most famous quotations of Zygmunt Bauman:

> *"[R]eal dialogue isn't about talking to people who believe the same things as you".*

Paraphrasing this famous quotation, it is possible to have a wider interpretation of what Constitutions represent for our society. In such a globalized context as the one in which we live in, it is important to highlight how important is the confrontation with different national and supranational contexts, connections that give the opportunity to the citizens to be able to understand how is it possible that nowadays we are assisting to an ever increasing creation and necessity of new rights, now considered essential. The increasing interconnection that characterises our society can be considered as one of the explanations, as one of the engines of this ever-increasing Constitutional updating process, through the recognition of new rights and necessities advanced by the citizenry.

Nowadays, the focus has shifted. While previously the focus was entirely on the present generation, implementing short-term policies, with the aim of winning elections and gaining political power, nowadays, increasing attention by the public agenda is being given to the future generations, adopting a more "future-oriented" vision. Even to the national level, with the recent amendments of articles 9 and 41 of the Italian Constitution, and even at the international level, with the UN "Agenda 2030", that will be dealt with in the third chapter of this thesis, real changes have been implemented to respect the new needs, the new rights that modern society is developing and requesting.

Even from a juridical perspective, it is possible to use as an example the new "climate change litigation", through which groups of citizens, concerned about the environmental issue, can, via legal instruments, protect our planet, catalysing public health policies towards programmes and projects different from the usual ones.[120]

Sign of the Italian Constitution text, approved on 27 December 1947. Source:https://www.ansa.it/sito/notizie/politica/2017/12/26/la-costituzione-compie-70-anni-promulgata-27-dicembre-1947_9d216db9-25ef-4bf2-9b29-3fae3aa554ef.html

In this section, I would like to focus on how actual direct citizenry involvement in public health policies creation could affect the human rights stated in the Italian Constitution. The Italian Constitution is well known because, despite it has been wrote in 1947, it was, and is still today, considered to be at the forefront of respect of human rights. Composed by 139 articles and 18 "transitional and final provisions", the first 12 articles, known as "Fundamental Principles", enunciate the fundamental rights of the Italian Republic. They are defined as fundamental in order to give the idea that these 12 articles represent the cornerstones of the Italian Republic. Italian Constitution continues with the "First Part – Rights and Duties of Citizens", composed by articles from 13 to 54. In this First Part, in turn divided into four Titles, are enunciated the rules necessary for the creation of an equal and free society. Title I, composed by articles from 13 to 28, is called "Civil Relations", while Title II, composed by articles from 29 to 34, is called "Ethical and Social Relations". Title III (articles 35 – 47) regulates "Economic Relations", while Title IV (articles 48 – 54) regulates "Political Relations". This First Part regulates all the aspects of citizens' life, like rights about the freedom of thought, freedom of association, the right

[120] Bartolucci, L., 2022. Le generazioni future (con la tutela dell'ambiente) entrano "espressamente" in Costituzione. *Forum di Quaderni Costituzionali*, 2. at: https://www.forumcostituzionale.it/wordpress/wp-content/uploads/2022/05/03-Bartolucci-FQC-2 2022.pdf

to health, to education, aiming at creating a society as provided in art. 3, paragraph 2, of Italian Constitution, which reports that:

> *"It is task of the Republic to remove those obstacles of an economic and social nature which, by limiting de facto the freedom and equality of citizens, forbid the full development of the human person and the effective participation of all workers in the political, economic and social organisation of the country".*[121]

A recent example of this ongoing process, evidencing how this progress is going to affect our Constitution is the recent modification of article 9 and article 41. The increasing awareness about the right to health, the necessity to protect our environment, to create new models of production and consumption, with the purpose of reducing the footprint of the current generations is now also stated in the Italian Constitution. Constitutional Law n. 1 of 11 February 2022, on "Amendments to Articles 9 and 41 of the Constitution on environmental protection", has represented a huge step in the process of approaching and becoming more aware about what our society considers essential human rights that can no longer be ignored.[122] The Constitutional Law provided a new paragraph that has been added to art. 9. The new paragraph states that:

> *"The Republic […] protects the environment, biodiversity, and ecosystems, also in the interest of future generations. State law regulates the ways and forms of animal protection".*

The amendment of art. 9 of the Italian Constitution shows how actual debates have a huge power, able to modify the fundamental rights stated by our Republic, making the Constitution to adopt the wider concept of environment, considering it also as nature, ecosystem, and biodiversity.[123]

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[121]La Costituzione Italiana. *Senato della Repubblica*. Available at: https://www.senato.it/sites/default/files/media-documents/ROSSA_Costituzione_testo%20vigente_agg_7_11_2022.pdf

[122]Ferrari, M., 2022. Tutela dell'ambiente e degli animali nella Costituzione: la riforma pubblicata in Gazzetta. *Altalex*. Available at: https://www.altalex.com/documents/news/2021/10/15/tutela-dell ambiente-e-degli-animali-nella-costituzione-il-ddl-di-riforma

[123] Bartolucci, L., 2022. Le generazioni future (con la tutela dell'ambiente) entrano "espressamente" in Costituzione. *Forum di Quaderni Costituzionali*, 2. at: https://www.forumcostituzionale.it/wordpress/wp-content/uploads/2022/05/03-Bartolucci-FQC-2 2022.pdf

Despite that, some scholars highlight that even if this represents a huge step towards the respect of new needs and rights and the starting of a process of innovation, it does not include one of the main topics today debated in the international public agenda, that is sustainable development. Using the definition provided in 1987 by the "Brundtland Report", sustainable development is

> *"[T]he development that meets the needs of the present generation without compromising the needs of the future ones".*[124]

Despite this second concept could be defined as wider compared to the one added recently to the Italian Constitution, it cannot be denied that the amendments of articles 9 and 41 represent a huge step toward the respect of future generations, that can be seen as an intergenerational and intragenerational public health pact aiming at creating a more conscious present citizenry.

Italian Constitution article 41 has been modified by adding some words, posing attention to the aspects of health and environmental protection. Nowadays public debate is focusing ever more on the aspects of inclusion and equality, and, in accordance with article 41 of the Italian Constitution, the Republic must provide limitations to human activity and economic growth in order to protect what today are considered inviolable issues, far above mere economic profit, and necessary for the achievement of social and environmental well-being. Moreover, article 41 states that:

> *"Private economic initiative is free. It may not be carried out in conflict with social utility or in such a way as to damage health, the environment, security, freedom, and human dignity. The law determines the programmes and controls appropriate so that public and private economic activity can be directed and coordinated for social and environmental purposes".*

We can evaluate the amendments of Italian Constitution articles 9 and 41 as the first step in a process that will change several aspects of our fundamental Charters, highlighting

[124] Ibidem

how nowadays Constitutions are not free from influences coming internationally, underlying the increasing interconnection each of us is witnessing.

Using the words of Norberto Bobbio*: "[F]undamental rights originate as natural rights, develop as constitutional rights, and move towards the goal of universal rights. The continuous path [...] proceeds slowly from the recognition of the rights of the citizen of a single state to the recognition of the rights of the citizen of the world, […]; from the internal law of individual states, […], to cosmopolitan law".*[125]

It seems that nowadays the concept of human rights has widened, including aspects that in the past were not given attention: LGBTQIA+, the environment, migrants and refugees, gender equality and the digital world are the main topics, deeply related to public health, that animate actual political debates.

From a collective standpoint, Article 32 of the Italian Constitution, which text follows,

> *"The Republic protects health as a fundamental right of the individual and as an interest of the community and guarantees free care for the indigent. No one may be obliged to undergo a particular medical treatment except by provision of Law. The Law may under no circumstances violate the limits imposed by respect for the human person"*[126]

acknowledges health protection as a fundamental right of the individual, a concept further reinforced at an international level by articles from 22 to 27 of the Universal Declaration of Human Rights (UDHR).

[125]Cartabia, M., La Costituzione italiana e l'universalità dei diritti umani. Available at: https://www.astrid-online.it/static/upload/protected/Cart/Cartabia_-Lincei_-10_1_2008---def.pdf

[126]La Costituzione Italiana. *Senato della Repubblica*. Available at: https://www.senato.it/sites/default/files/media-documents/ROSSA_Costituzione_testo%20vigente_agg_7_11_2022.pdf

2.3 The Universal Declaration of Human Rights (UDHR)

Approved and proclaimed by the United Nations General Assembly (UNGA) on 10 December 1948, the Universal Declaration of Human Rights represents a fundamental step for our society in terms of the desire of the international community to protect and strengthen universal rights due to every citizen, or better, as stated in the document, every human being. Given the importance of the Universal declaration of Human Rights, which was considered pioneering for the time, the United Nations General Assembly imposed its maximum dissemination in as many languages as possible and by any useful means.[127]

Eleanor Roosevelt holding the English language version of the Universal Declaration of Human Rights in November 1949. Source: https://en.wikipedia.org/wiki/Universal_Declaration_of_Human_Rights

Consisting of a preamble and thirty articles, it is today considered to be at the same level of the general principles of international law. The preamble sets out the main values that are protected by the thirty articles, and, among the main values presented, are comprehended dignity, social progress, the pursuit of the highest possible standard of living and friendly relations between nations. These values, according to the declaration, are to be promoted and achieved through the teaching and education of citizens, evidencing the necessity for a deep change within the thinking and the behaviour of the citizenry, actions, so, that must not be limited to governmental interventions.[128]

As mentioned above, UDHR articles from 22 to 27 enshrine the individual, social and cultural rights of citizens, with a special focus on health, and consequently, in a broader perspective, the public health of the community. In proposing the continuous search for improvements in living standards, it focuses on the protection of groups requiring greater attention, such as women, children, the older and people with disabilities.

[127]UDHR. *Senato della Repubblica*. Available at: https://www.senato.it/leg18/4597?pubblicazione=628 p.4
[128]Ibidem, p.6

Deepening in the analyses of these UDHR articles, numbers 22, 23 and 25 should be highlighted separately, due to the high relevance they vest in relation to the protection of public health through institutional intervention. Article 22 states that:

> *"Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international cooperation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality".*[129]

So, article 22, which full text is reported above, sets out the right to the realisation of every human being from the point of view of the development of his or her personality and the guarantee of his or her human dignity. Furthermore, it recalls the right to the protection of social security.

Continuing focusing on article 23, it reports that:

> *"Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment. Everyone, without any discrimination, has the right to equal pay for equal work. Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection. Everyone has the right to form and to join trade unions for the protection of his interests".*[130]

The third paragraph of article 23 places the focus in particular on the right of the working class, stating that every worker has the right to a wage adequate to guarantee his or her dignity and that of its family.

Moreover, fundamental to the issue of public health is the reference to the guarantee of other means of social protection in case of need by the working citizen.

[129]Ibidem, p.11
[130]Ibidem, p.11

Analysing the last one of the three before mentioned UDHR articles, the text of article 25 follows, stating that:

> *"Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.*
>
> *Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection".*[131]

So, article 25, with its two paragraphs, provides a systemic view of the various aspects of public health that must be guaranteed to the citizens. Enouncing before food and clothing and ending with the maintenance of security in the event of unemployment and disability, or in any case for situations caused by circumstances beyond citizens control, the text of the article provides a full list of the principal factors influencing the quality of the standard of living of a person.

Accordingly, the before mentioned article 32 of the Italian Constitution also underscores the collective value of health protection, particularly in the context of public health policies, which is regarded as a responsibility of the entire community, backgrounded by governmental efforts. While in the past health was mainly recognised as an individual right, it has become clear that its consequences directly affect society as a collectivity. Public health policies, projects and programmes, have been understood to not be limited to the health sphere, but have been recognised as having a direct and deep impact also on various other issues, including economic, social and ethical aspects.

For example, it is possible to mention the considerable financial burden imposed on the society by individuals requiring treatments through the national public health system. Despite the social aspect of solidarity, it represents a financial cost, while, at the same

[131] Ibidem, p.12

time, the contribution provided by healthy individuals to the society progress, in terms of employment and productivity, is significant.

Again, the principle of solidarity underpinning health protection is predicated by the notion of caring for the sick. It is therefore vital to safeguard the health of the entire community in order to prevent the emergence of various diseases and social problems. Italy boasts an extensive and well-structured system of measures, ranging from prevention to healthcare for all, without limiting access to its medical care national system only to the Italian citizenry. The scientific research and health education initiatives are supported, with the objective of informing the population about health risks and the importance of healthy lifestyles, with specific attention given to the worker conditions by raising awareness about safety in the workplace.

2.4 The multiple faces of public health

Changing perspective in relation to the concept of public health, this second chapter continues deepening public health collective aspects. Several definitions have been developed in the last decades, evidencing the profound progresses that this concept has undergone.

For example, the concept of "One Health", that proposes an increased systemic vision, highlighting the importance that the social, environmental, physical and psychological factors play in the definition of public health within a society. Already in 1946, the World Health Organization (WHO), defining health as:

"[A]n individual state of complete physical, mental and social well-being",

went beyond the simplistic idea of qualifying health as the mere absence of any physical and mental illness, making the first steps toward a wider concept, that is, the above mentioned one of One Health.[132]

132 Bocchi, S., 2021. L'ospite imperfetto. L'umanità e la salute del pianeta nell'Agenda 2030. *Carocci Editore*, p.47

Maintaining this systemic vision, I would like to cite Cramm and Nieboer, who asserted that

> *"[…] health management and disease prevention require global welfare management"*[133],

advancing the concept about the necessity of adopting a systemic approach while talking about and dealing with such a complex issue as that of public health measures and policies.

In a sort of development path, in 1992 the United Nations (UN) provided the concept of "Ecosystem Health" while holding the "United Nations Framework Convention on Climate Change" (UNFCCC), known also as the "*Rio Declaration on Environment and Development".* The idea characterising this new concept was that of making it clear that in order to protect the humankind, the safeguard of the environment, considered as the background within which our society was evolving, represented, and still to date represents, a fundamental factor to be considered, without which no fair and sustainable development could be desirable.[134]

Furthermore, even information management represented, and still today represents, a crucial aspect while programming and implementing public health policies. An ambitious objective is that

> *"[…] to develop a society based on shared knowledge, on a grammar of sustainability, achieved through scientific, technological, economic, social and political progress, thanks, therefore, to an advanced form of integral innovation".*[135]

In the same way, within this systemic vision, are comprehended the 17 Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda. These Sustainable Development Goals, according to Stefano Bocchi must be seen as a kind of

133 Ibidem, p.47
134 Ibidem, p.48
135 Ibidem, p.55

"[T]iles of the same mosaic, to be seen as a whole".[136]

The systemic view proposed has been thought in order to abandon the pursuit of a purely economic well-being, while at the same time protecting the other aspects considered fundamental to the achievement of public health progresses for our society.[137]

Again, from this point of view, a systemic approach could allow the achievement of new solutions arising from the intertwining of interrelated areas. An example can be represented by the so-called "nature-based solutions", as defined by the European Commission regarding the solutions to public health problems reached through the complementary use, or better, harnessing, of natural solutions provided by the environment and problems that occur in urban settlements.[138]

2.5 Public health in the urban context

The advantages that green areas within urban contexts, such as the presence of parks, can bring, among many others, are the increasing in air quality, the possibility to practise sports and to spend time in the open air, increasing both physical and psychological wellbeing, the possibility of absorbing rainfall excess, avoiding flooding. These are examples of some advantages, or better, synergies, granted by the simple integration of two different systems, so, the natural and the urban one.[139]

Treating the concept of public health, the relation between the environment and the urban context has played a fundamental role, acting as a file-rouge in the developing of this master thesis.

Of course, these kinds of policies are affected by the economic situation of a country and, consequently, of its citizens. For instance, recent research led to the consciousness that

[136] Ibidem, p.56
[137] Ibidem, p.57
[138] Ibidem, p.97
[139] Ibidem, p.97

the presence of green areas, and thus, of wellbeing and protection of public health, was directly proportional to the social and economic status of the residents in those areas.[140]

Indeed, the research proposes some conclusions regarding the positive correlation between distributional equity of urban tree canopy (UTC) coverage and average household income in some of major United States cities, including Baltimore, Los Angeles, New York, Philadelphia and Sacramento. By the use of statistic measurements and instruments, the authors of the article advanced some important findings.[141]

The final outcomes proposed by the researchers support for the presence of a strong positive correlation between average income of citizens and the presence of tree canopy, thus advancing some important conclusions to be made from a double perspective, so, with regard to environmental justice and social cohesion.

Furthermore, focusing more on the several community benefits deriving from the implementation and the investments on green spaces within the urban context, citing the authors of the above-mentioned research,

> *"Urban Tree Canopy (UTC) cover has been associated with improved aesthetics, noise reduction, and stronger social cohesion and community empowerment".*[142]

The presence of green areas has been positively associated, following numerous studies and research, with various public health aspects, such as a decrease in childhood obesity and a reduction in psychological distress, with illnesses such as depression, anxiety and stress.[143]

Accordingly, many urban improvement projects include among their major objectives the encouragement and development of green areas within cities. The authors of this pioneering research therefore wish to emphasise, in drawing this conclusion, that citizenry wellbeing, public health and environmental justice are not limited to the mere

[140] Ibidem, p.99
[141] Schwarz K, Fragkias M, Boone CG, Zhou W, McHale M, Grove JM, et al. (2015) Trees Grow on Money: Urban Tree Canopy Cover and Environmental Justice, p.1
[142] Ibidem, p.2
[143] Ibidem, p.2

number of trees that are planted and cared for within the urban context, but must be considered in terms of the distribution of ecosystem services,[144] definable as those benefits granted by the ecosystem and the nature to the urban contexts and those who live in these areas. To provide some examples, those ecosystem services include fresh water and clean air provision, raw material availability, air purification, accessibility to green spaces, aesthetic areas and recreational opportunities.

As reported before, answers to public health issues require the development of complex systems. As authors Rutter and colleagues propose as example,

> "*[…] the changing distribution of obesity across the population can be conceptualised as an emergent property of the food, employment, transport, economic, and other systems that shape the energy intake and expenditure of individuals"*.

Despite the long temporary framework that this kind of policies would require, it have been evidenced that usually those public health initiatives are backed by simple and short-term plannings instead of long term and complex ones, clearly reducing their efficiency and effectiveness. [145]

2.6 Food (in)security

Strongly related to the presence of green areas within the urban context, is the food security aspect. The diffusion of the opposite situation, so, that definable as food insecurity, represents a huge threat from a social perspective. Further of being an issue strongly linked to natural resources and climate changes, food insecurity plays a fundamental role in social stability and social equity, necessitating well-structured public health initiatives and measures in order to have an effective response by the Governments.

[144] Ibidem, p.4
[145] Rutter et al., 2017. The need for a complex systems model of evidence for public health. *The Lancet*, Volume 390, Issue 10112, 2602 – 2604, p.2602

Accordingly, food insecurity represents a national public health problem and an underestimated social determinant of health (SDH). By food insecurity are meant not only the difficulties and the consequent limitations in reaching a sufficient level of nourishment, but it comprehend also the availability of a just and healthy diet, able to limit the spread of Non-Communicable Diseases (NCDs), such as obesity, diabetes, heart diseases and hypertension, that deeply affect the contemporary society, and in particular the most vulnerable citizens segments, such as people with disability, children, the elderly and the low-income ones.[146]

The definition provided by the US Department of Agriculture (USDA) about food insecurity is:

> *"[H]ousehold-level economic and social condition of limited or uncertain access to adequate food".*[147]

Other fundamental aspect relating to food insecurity is that, adopting a wider perspective, if experiencing a food insecurity situation, those that face such a drastic circumstance have to previously deal also with other social and health problematics, being food an essential human need. Other health aspect that usually are abandoned before those limiting food access are transportation, medication and housing, all of them representing essential health aspect both from an individual and from a social and collective perspective.

Food insecurity, being a threat concerning several interdependent public health sectors, is a public health issue than require a long-term and scale-effective strategy in order to have fully implemented programmes and measures able to provide effective and efficient results.[148]

Furthermore, according to the Food and Agriculture Organization (FAO), the opposite situation, so, Food Security, is the fair and equal situation according to which:

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[146] Ibidem, p.655
[147] Murthy, V.H., (2016). Food Insecurity: A Public Health Issue. *Sage Publications, Public Health Reports* (1974-), Vol. 131, No. 5 (September/October 2016), pp. 655-657, p.655
[148] Ibidem, p.656

"[A]ll people, at all times, have physical, social and economic access to sufficient, safe and nutritious food […] [that] meets their dietary needs and food preferences for an active and healthy life".[149]

The Food and Agriculture Organization (FAO) is the United Nation Organization institution, established in 1945, dedicated to developing and implement food related programmes. FAO main objectives are those of eliminating hunger and the development of food programmes promoting nutrition and sustainable agriculture.

Being at the top level of the international agenda, food (in)security represents a topic concerning both developed and developing countries. Despite being food security itself a public health issue, several are the other public health factors influencing this issue. In order to provide some examples, it is possible to mention how wars usually led to famine and productivity reduction both in agricultural, industrial and services sectors, affecting not only directly the populations of the conflicting areas, but impacting indirectly also citizens of the non-belligerent nations. The recent circumstances caused by the Russian aggression against Ukraine have clearly represented this public health risk scenario. Being the major wheat producer and exporter in the European context, the belligerent situation that Ukraine had to face, drastically reduced its national wheat production, impacting not only the Ukrainians, but drastically affecting also all other importing economies, reverberating in many other different sectors, such as, in particular, deeply modifying prices of chemical products and electricity services, leading to a situation that could be defined as a generalised polycrisis.[150]

2.7 The role of the World Health Organization (WHO)

Changing the approach to public health, it is useful to broad the observation of the developing progresses undergone by the concept, evidencing the strong link between public health and human rights. Dealing with the public health issue it must be mentioned

[149] Pereira, Rosangela A., e Allison Hodge. «Food Insecurity: A Critical Public Health Nutrition Concern». *Public Health Nutrition*, vol. 18, fasc. 16, November 2015, pp. 2893–94, p.2893.
[150] Ibidem, p.2893

the World Health Organisation (WHO), the main United Nation Institution administrating UN health and public health field.

The establishment of the World Health Organisation in 1948 and the consequent and simultaneous adoption of the Universal Declaration of Human Rights (UDHR) in the same year represented two pivotal moments in this process, providing a significant catalyst for the internationalisation of public health, a development that continues to yield substantial benefits to this day.

The end of the Second World War in 1945 underscored the notion that public health administration transcends national boundaries, encompassing issues that are characterised by profound interdependence and that need as an imperative international cooperation and collaboration. The expanding role and importance acquired by human rights has significantly impacted the manner and approach of policies development, programmes implementation, projects management, and operational practices.[151] Moreover, it is possible to affirm that the approach adopted while giving solutions in public health issues has deeply changed, embracing, as reported above, a more conscious style towards a social and human rights approach.

Authors Meier and colleagues in their article claim that:

> "*With international law evolving to address threats to health, a rights-based approach transforms the power dynamic that underlies public health*".[152]

2.8 World Health Organization Constitution

Since its establishment in 1948, the World Health Organization played a fundamental role in this contemporary focus and priorities shift. The Constitution of the World Health Organization, so defined due to its listing of the main purposes and objectives it aims to

[151] Mason Meier, B., et al., 2018. Human Rights in Public Health: Deepening Engagement at a Critical Time. *Health and Human Rights*, Vol. 20, No. 2, SPECIAL SECTION: Human Rights and the Social Determinants of Health (DECEMBER 2018), pp. 85-92, p.85
[152] Ibidem, p.86

pursue through its activity, provides a sort of guideline to be respected while legislating, drafting and policing about public health.

WHO Constitution reports that:

> *"[T]he enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being,"* defining health positively to include *"a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity".*

The awareness of the need for such an institution dealing with public health issues started to develop with the increase in the number of trade exchanges that took place at the beginning of the nineteenth century. As mentioned in the first chapter of this thesis, simultaneously with the growth in trade with new continents, so increased the wealth and the exchange of information, and, at the same time, also did the risk of contracting and importing new diseases and threats to public health into the territories of origin.

The risk posed by the spread of new diseases and epidemics, for which there were no means, information and treatment available at the time, mainly due to the novelty they represented, drew attention to the need to develop a new kind of organisation and a new system of cooperation and collaboration between the trading nations.

This awareness led to the held the first sanitary conference, that took place in Paris in 1851. The aim of the sanitary conference was that of increasing the efforts relative to cooperation and collaboration between the countries of the European continent in order to face the new important diseases being unintentionally imported from the other continents, in particular the Asian one, by commercial and trading activities. From a public health point of view, particular attention was given to the prevention, control and management of such risky, despite remunerating, operations, recognising the fundamental importance of health management further to the mere medical and scientific approach.

Continuing with the pursuit of this goal, in 1919 the League of Nations established the Health Organisation of the League of Nation in Geneva, Switzerland. This process of institutionalisation of public health led in 1946 to the approval of the Constitution of the WHO in New York by the International Health Conference. WHO Constitution came into

force only in 1948, in accordance with the provisions entailed in article 79 and article 80 of the WHO Constitution. Article 80, in fact, provide that:

> *"This Constitution shall come into force when twenty-six Members of the United Nations have become parties to it in accordance with the provisions of Article 79".*

The first World Health Assembly met in Geneva in 1948 and established as main priorities to be pursued by the WHO the development and implementation of programmes and the relative measures to deal with the principal diseases of the time, so, malaria, tuberculosis, venereal diseases, maternal and child health, sanitary engineering, and nutrition.

Furthermore, representing a pioneering provision, disease prevention and control, including mass campaigns, where recognised to be essential factors to organise and manage in order to make public health measures to be effective and efficient.

Briefly reporting some of the main notable programmes and successes in public health by WHO, it is possible to mention the 1978 Alma Ata Declaration. The Declaration provided for increases in cooperation and coordination among the member states to pose primary health care as an essential feature of their national health care systems.

Another important objective was that declared in the 1990s, when the WHO proposed a series of interventions and programmes about changes in people lifestyle. In those years the WHO launched numerous programmes aiming at increasing better and healthier lifestyles, with a particular focus on reducing the use of tobacco products among the population. Furthermore, and strongly linked to the two objectives above reported, was the limitation of the spread of non-communicable diseases (NCDs), through the implementation of public health measures enforcing the diffusion of healthy lifestyles, often recognised as the principal causes of NCDs diffusion.

Concluding this brief WHO historical programmes analysis, it must be highlighted also the strong correlation identified and advanced about public health and environmental degradation. In 1992, indeed, during the United Nations Conference on Environment and Development, internationally known also as "Earth Summit", held in Rio de Janeiro, the

WHO posed the focus on the public health risks deriving from the environmental degradation.[153]

The numerous goals reached by the WHO have been achieved by acting in compliance with its Constitution, which offers a groundbreaking vision, posing as its main objective the pursuit of happiness, harmonious relationships and security for all people, not limiting itself therefore to mere concrete and material goal and, above all, not limiting its provisions to the wellbeing of its member states citizens. In its continuation the WHO Constitution, in fact, highlights the concept of the so-called *common aspects*.

The health of all people, independently by their nationality, is an essential factor for the maintenance of peace and security among the nations, which requires maximum cooperation between individuals and, from a collective point of view, among the Nations.

Deepening the concept of common aspects, including so common risks and common progresses, similar to all States and all people, the WHO Constitution emphasizes how unequal development in the advancement of public health protection and control of the spread of diseases is a mutual danger, which does not respect national borders, underlying, so, how a systemic action is therefore to be considered fundamental and essential.

The Constitution evidence Governments responsibility for the development of social and health measures adequate to promote the protection of the individuals and the community. Accordingly, the UN enjoys a series of powers relating to the functions it can exercise within its Member States borders.

Moreover, with regard to the topic of public health, the analysis of the WHO Constitution first Chapter is essential. Reporting the objectives pursued by the WHO, the text of the first article enunciates that:

> *"The objective of the World Health Organization (hereinafter called the Organization) shall be the attainment by all peoples of the highest possible level of health".*

[153] McCarthy, Michael. «A Brief History of the World Health Organization». *The Lancet*, vol. 360, fasc. 9340, October 2002, pp. 1111–12, p.1111.

Continuing with the analysis of WHO Constitution, the second chapter deals with the functions recognized to the Organisation. WHO is recognized as the coordinating and directing authority in matters of public health. Furthermore, it has the duty to maintain collaboration, assist the Member States in case of need, stimulate and promote the eradication of diseases from the population.

Moreover, WHO must promote prevention, propose legislative measures, such as recommendations, regulations and agreements, protect, in cooperation with the other agencies, nutrition, housing, sanitation, economic or working conditions and environmental hygiene. It must also develop the curative and preventive aspects from an administrative and social point of view, provide information and counselling, and assistance, promote the development of a critical reasoning capacity by the population about public health issues, establish international standards and, finally, take all the necessary actions to achieve the objectives promoted in the first chapter.[154]

2.9 WHO recent challenges

One of the most recent challenges faced by the WHO is, for example, the management of a virus spread in Uganda in January 2025. Related to the Ebola virus family, which last identified case in Uganda was in 2022, the efforts and programmes of the WHO have been directed to the support of Kampala health authorities, in order to develop effective and efficient measures to limit the virus spread among the population, in particular due to the risks represented by the presence of highly populated areas in the African nation. Furthermore, financial support, with the allocation of 1 million USD, and medical supply, sending medicines, medical instruments and personnel, had being provided. WHO is providing also guidelines in order to track the possible contact of the infected population, evidencing the importance of monitoring the spread and of the identification of possible

[154]WHO Constitution. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://apps.who.int/gb/bd/pdf/bd47/en/constitution-en.pdf

contacts. This last aspect has been promptly reported also by the WHO Regional Director for Africa, Matshidiso Moeti, who declared that:

"[It is fundamental to] scale up measures to quickly identify cases, isolate and provide care, curb the spread of the virus, and protect the population. Uganda's robust expertise in responding to public health emergencies will be crucial in ending this outbreak effectively".[155]

Accordingly, in evidencing the dangerous impact that threats to public health could represent for human rights situation, often in a critical situation in the African continent, UN rights chief Volker Türk asserted that:

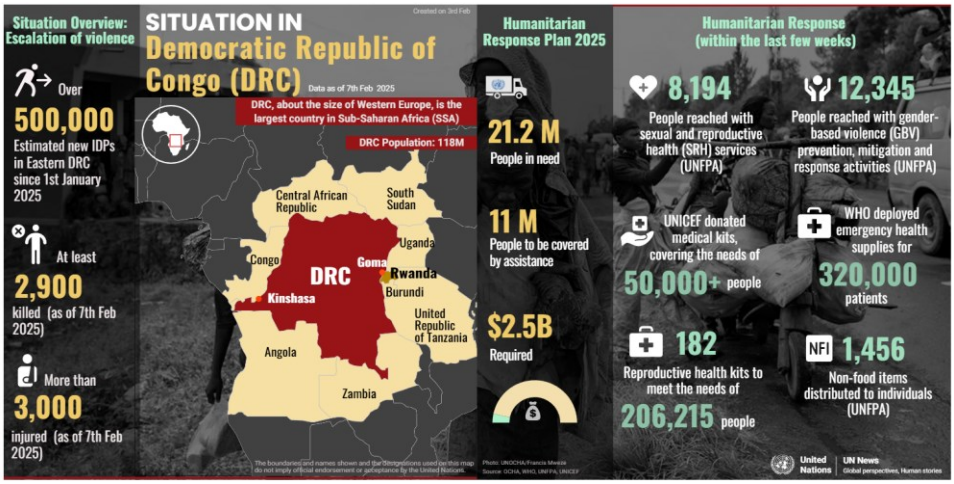
"*Human rights are a low-cost, high-impact investment to mobilize people for peace, security, and sustainable development; and to build social cohesion based on the contributions of every individual*".[156]

Another context in which WHO is present is the one of the mass displacements of civil population in the Democratic Republic of Congo (DRC). Being a mineral rich nation, several of its regions are actually in a conflict situation where the national army clashes with rebels, which fight to occupy territories. The consequent lack of services and of law created a difficult humanitarian situation, with medicine shortages and population using water directly from the Kivu Lake, situation that increase the risk of disease and virus spread.[157] In such a drastic context, a coordinated effort, under the WHO guide, among the independent nations and the several NGOs and humanitarian organisations active in the areas, is ever more necessary.

[155] UN Website, 30 January 2025. World News in Brief: Deadly virus outbreak in Uganda, $500 million human rights appeal, Thailand's lèse-majesté laws in spotlight. *UN News.* Available at: https://news.un.org/en/story/2025/01/1159611

[156] Ibidem

[157] UN Website, 11 February 2025. Humanitarians uphold commitment to support civilians in eastern DR Congo. *UN News.* Available at: https://news.un.org/en/story/2025/02/1160031



Source: https://news.un.org/en/story/2025/02/1160031

Another recent challenge that the WHO is trying to face through its programmes is the situation of children diagnosed with cancer in low-income countries. The WHO is implementing a new platform, with the purpose of distribute cancer medicine for children. The first six countries that will play a pioneering role, benefited by the project, are Uzbekistan and Mongolia, followed by Ecuador, Jordan, Nepal and Zambia. Data shows that in low-income countries the death rate among children diagnosed with cancer is 70%, while in high income countries, children in the same situation, have a survival rate of 80%.[158] Despite the huge financial support needed by such a complex infrastructure, Andre Ilbawi, Technical lead of the WHO cancer control programme, affirmed that this platform will be able to reduce the survival rate gap, affirming that *"[T]he vision of giving every child a chance to fight cancer – no matter where they are born, is now becoming a reality".*[159]

To evidence the fundamental role that international relations play within public health initiatives, and, specifically in this paragraph, in relation to WHO public health programmes, it is useful to evidence the potential threats that the actual US funding limitations will represent for the implementation of WHO projects.

[158] UN Website, 11 February 2025. Meds platform launch gives children with cancer a fighting chance. *UN News.* Available at: https://news.un.org/en/story/2025/02/1160036
[159] Ibidem

The United States President Donald Trump announced, in January 2025, that the United States will withdraw from the WHO, and, consequently, that US funds will be drastically reduced, and stopped in the future years. Moreover, US personnel working with the WHO have been interested by the decision, that provided for the recall of the American workers collaborating with the UN institution.

Such a drastic measure will deeply affect WHO ability to face actual public health challenges, being clear that:

> "*Cutting U.S. funding will leave a critical gap in the WHO's ability to respond effectively to global health crises, emergencies, and outbreaks […]*".[160]

The significant financial amount necessary to fund WHO public health programmes are clearly evidenced by the recent responses implemented to contrast the Ebola outbreak in Uganda. To fund vaccine and therapeutics trials, WHO has already provided 3 million USD. Furthermore, relating to the above reported conflict situation in DR Congo, due to the US funding cuts, WHO responding capacity is facing a critical situation. The numerous people died and injured due to the conflict are posing an enormous challenge to the sanitary system in the country, requiring ever more assistance. With decreasing funding, medical and assistance personnel, medicine and services are running out, leaving numerous people without the necessary required assistance, situation creating a favourable context for the outbreak of infectious diseases.[161]

Instead, relating to the struggle for the reduction of the survival rate of children with cancer between high and low-income nations, the above-mentioned childhood cancer treatment has registered a positive development, as reported by the WHO, that, in collaboration with the St. Jude Children's Research Hospital have started, as scheduled

[160] Yamey, G., Boghuma K. T. Withdrawal of the United States from the WHO - How President Trump Is Weakening Public Health. *New England Journal of Medicine*, vol. 392. April 15th 2025, pp. 1457–60. Available at: https://www.nejm.org/doi/full/10.1056/NEJMp2501790

[161]UN Website, 12 February 2025. US funding cuts threaten global health response, WHO chief warns. *UN News.* Available at: https://news.un.org/en/story/2025/02/1160081

by the programme, to distribute without charge cancer medicines to ill children in the pioneering countries, so, Uzbekistan and Mongolia.[162]

This brief paragraph related to the recent tests WHO is facing, clearly evidence the multi-side approach vested by this UN organisation while implementing its public health programmes. Coordinated social, humanitarian, economic, legislative and financial efforts are necessary while dealing with such public health complex commitments. Furthermore, it aims to highlight the essentiality of such a UN agency, specifically from the point of view of maintaining, administrating and protecting public health at an international level, in particular in this historical period characterized by an increasing globalization, in which national borders are ever more blurred, with risks and threats that must be faced with a vision promoting international cooperation and long-term coordination policies.

2.10 How climate changes affect public health

One of the major concerns about the development of public health policies are those related to climate changes. Several are the human rights linked, or better, strongly dependent to the protection of our environment. Meier and colleagues report that:

> *"As public health concerns begin to be considered in climate change responses, human rights can provide a legal path to support international mitigation efforts and health system adaptation to address both the direct and indirect public health impacts of climate change".*[163]

The above-mentioned Italian Constitution amendment, with the Constitutional Law n. 1 of 11 February 2022, on "Amendments to Articles 9 and 41 of the Constitution on

[162] Ibidem

[163] Mason Meier, B., et al., 2018. Human Rights in Public Health: Deepening Engagement at a Critical Time. *Health and Human Rights*, Vol. 20, No. 2, SPECIAL SECTION: Human Rights and the Social Determinants of Health (DECEMBER 2018), pp. 85-92, p.85 Available at: https://www.jstor.org/stable/26542062?searchText=public+health&searchUri=%2Faction%2FdoBasicSearch%3FQuery%3Dpublic%2Bhealth&ab_segments=0%2Fbasic_search_gsv2%2Fcontrol&refreqid=fastly-default%3A98f5dd7d224629b5d1cb59a3c4c59e59&seq=1

environmental protection", represents a clear and recent example of how environmental aspects deeply deal with public health. With the updating of these two Italian Constitutional articles, the Italian Republic recognise the importance of protecting the environment, comprehending in its complexity biodiversity and animals, so, the ecosystem in its entirety, in a future oriented vision, reporting that these efforts are principally dedicated to the future generations. The amendment of article 41 goes further, underlying that private economic initiative may not represent a trade-off situation between economic progress and social utility, posing threats to health, the environment, security, freedom, or human dignity. It concludes recognising that private economic initiatives shall be acted minding social and environmental needs.[164]

Furthermore, leaving the Italian national scenario and adopting a wider international lens, it is possible to cite numerous international programmes and initiatives that, in the last decades, have demonstrated the growing awareness about the "public health – environmental protection" interconnection. Some of the most well-known international programmes are the seminal works of the 1992 UN Framework Convention on Climate Change (UNFCCC), the 2015 Paris Agreement, and the 2021 Glasgow Climate Pact, from which several foundational principles have emerged.

These initiatives and related documents, that represent a collective global effort to address the pressing issues of climate change, underscore the interconnected relationship between environmental sustainability and public health. The 1992 UN Framework Convention on Climate Change was, specifically, instrumental in raising awareness about the critical threat posed by climate change to public health, particularly in low-income and developing countries that are extremely vulnerable due to their limited availability of resources and, consequently, limited attention given to issues that can obstacle economic development.

[164]Bartolucci, L., 2022. Le generazioni future (con la tutela dell'ambiente) entrano "espressamente" in Costituzione. *Forum di Quaderni Costituzionali*, 2. at: https://www.forumcostituzionale.it/wordpress/wp-content/uploads/2022/05/03-Bartolucci-FQC-2 2022.pdf

In recent decades, it become clear that the strong relation between human rights and protection of the environment could not continue to be ignored, and that it was necessitating for legislative local, national and international interventions.

Furthermore, this generation is ever more aware of the concept of future generations rights, and the legacy we want to leave to future generations that will come after the present one is not only an awareness of the importance of protecting public health and human rights, but, above all, this consciousness underlines the role played by the environment relating to public health, which is a fundamental factor for a prosperous existence. [165]

A possible solution proposed in order to permit a contemporary economic progress without threatening public health conditions, and that is also strongly contemplated while drafting and implementing economic-financial national programmes, is the concept of sustainable development.

Sustainable development was first nominated when the World Commission on Environment and Development (WCED) defined it, in the Brundtland Report of 1987, as

> *"[T]hat development which meets the needs of the present generation present without compromising the satisfaction of the needs of future […] [ones]".*[166]

A kind of intergenerational agreement through which the actual generation commits itself to limit its influence on the environment in favour of the needs of the future generations. Sustainable development can be seen, under a special lens, as a kind of future oriented public health policy. Our society cannot limit its provisions to the present just implementing short term programmes. The political arena must develop a future oriented consciousness, dedicating attention also to the future generations that will inhabit our planet in the future.

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[165]Meier, B.M.; Bustreo, F.; Gostin, L.O. Climate Change, Public Health and Human Rights. Int. J. Environ. Res. *Public Health 2022*, 19, 13744, p.1

[166] Mondini, G., 2019. Valutazioni di sostenibilità: dal Rapporto Brundtland ai Sustainable Development Goal. *Journal valori e valutazioni*, n.23. Available online: https://siev.org/wp-content/uploads/2020/02/23_15-_-MONDINI.pdf

2.11 The complexity of the public health concept

The Universal Declaration of Human Rights (UDHR) was the foundational document upon which states subsequently negotiated the codification of specific legal obligations into two separate human rights covenants. These covenants, promulgated in 1966, were the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR).[167] In terms of structure, the ICESCR consists of a preamble and 31 articles, divided into five parts.

Nico Schrijver, in his 2016 article, proposes a vision of increasing integration between the goals advanced by the two International Covenants. Approved during the Cold War, the opposition between the East and the West led to the creation of two separated documents, one dedicated to civil and political rights (ICCPR) and the other to economic, social and cultural rights (ICESCR). At the end of the Cold War, the gap between these two distinct visions disappeared, leading to the emergence of a more integrated approach to human rights.

Both adopted in 1966, the International Covenant on Economic, Social and Cultural Rights (ICESCR) regards those human rights concerning the right to work, trade unions, family, health and an adequate standard of living. At the same time, the International Covenant on Civil and Political Rights (ICCPR) covers rights more related to civil and political aspects, dealing with the right to freedom of thought, voting, political opinion, the right to a fair and just process. Obviously, having been created during the Cold War period, the development of these two treaties was profoundly affected by the tensions between the two hemispheres, with the areas under American hegemony focusing on political rights, while those states under the Soviet leadership were more focused on the rights of the workers, protecting the socialist ideology while labelling political themes as not particularly interesting, since being dear only to the bourgeoisie.

[167] Meier, B.M.; Bustreo, F.; Gostin, L.O. Climate Change, Public Health and Human Rights. Int. J. Environ. Res. *Public Health 2022,* 19, 13744, pp.4,5.

The conclusion to adopt more systemic vision and approach in human rights and public health issues is also proposed by author Schrijver in his article. Quoting Schrijver words:

> *"This is even more important now, after the Cold War, when the conviction that all human rights are universal, indivisible, interrelated and interdependent is gaining considerable ground"*[168]

It is evident that these international human rights standards have formed the normative basis from which a sort of new kind of human rights aiming to the protection of environmental health in international law have developed.

Despite the innovative and pioneering view that those international Covenants, so, ICESCR and ICCPR, proposed, the first step entirely focused on the protection of the environment as fundamental factor for public health was the UN Conference on the Human Environment, that took place in Stockholm in 1972. Despite its focus on environmental protection, the Conference failed in creating a specific law for the protection of the environment, and only in the 1990 the first report about climate change was drafted by the Intergovernmental Panel on Climate Change (IPCC). [169]

Climate change exerts a profound influence on public health, impacting a broad spectrum of health determinants. These impacts jeopardise the fundamental human rights that are intrinsic to the realization of the highest attainable standard of health for all individuals. [170]

Directly and deeply related to climate change is the threat related to the increasing diffusion of infectious diseases. Environmental degradation and climatic disasters create favourable conditions for the development and the circulation of new diseases. The principal aspect that characterises the seriousness of this threat for public health is the

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[168] Schrijver, N., 2016. Fifty years international human rights covenants. Improving the global protection of human rights by bridging the gap between the two covenants. *Wolters Kluwer Navigator, pp 457-464. Available at:* chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.geneva-academy.ch/joomlatools-files/docman-files/Nico%20Schijver%20-%20Fifty%20Years%20International%20Human%20Rights%20Covenants.pdf. P.463

[169] Meier, B.M.; Bustreo, F.; Gostin, L.O. Climate Change, Public Health and Human Rights. Int. J. Environ. Res. *Public Health 202*2, 19, 13744, p.3

[170] Ibidem, p.4

novelty of new illnesses and the particularly fast rhythm of their spread, due to the facility of contagion, consequent to the increasing globalization. Accordingly, from an international perspective, due to the novelty these diseases represent from a management perspective, new medical and public health solutions need to be developed and implemented. As happened during the Covid-19, the first months were marked by uncertainty, especially with regard to the various, and above all completely new, solutions to be adopted to limit the damages and the spread of the new virus. The same International Covenant on Economic, Social and Cultural Rights provides the obligation for states to develop strategies in order to prevent, treat and control epidemic diseases. From a public health perspective,

> *"[I]nfectious disease outbreaks [...] undermine the right to health, limiting the availability, accessibility, acceptability, and quality of health goods, facilities, and services".*[171]

The statement by Meier and colleagues reported above evidenced again the deep connection between human rights and public health. Moreover, always related to the climate change is the topic of food security, one of the most known public health aspects. Food security is a delicate and complex condition, influenced by levels of food adequacy, access, stability and availability and sustainability.[172]

As in every emergency situation, in cases definable as food insecurity, so, in situations and contexts where food adequacy, access, stability and availability and sustainability can not be granted, those that would be mostly negatively impacted by food insecurity in term of human rights and public health will be the poorer classes and, so, the citizens of developing and low-income countries.

Characterised by the same background of food security is the availability of safe and drinkable water. The ICESCR recognise to everyone the right to enjoy water and sanitation, and so, provide that all the states must

[171] Ibidem, p.5
[172] Ibidem, p.6

"[R]ealize safe, clean, accessible, and affordable drinking water and sanitation for all".

Furthermore, the wrong management of water resources is well known to led to the creation of drastic situations, such as those leading up to droughts and floods, deeply affecting life quality and livelihood conditions in the urban context.[173]

Emphasising the importance of climate change for public health and human rights is also the World Health Organisation (WHO), that in 2008 debated the "2008 Edition of the World Health Day to Climate Change".[174] Additionally, in 2009 the Office of the UN High Commissioner for Human Rights conducted research focused on evidencing the relationship between climate change and human rights, reporting in conclusion that climate change is a factor deeply impacting on several human rights.

In conclusion, numerous research and studies claim that States and governmental actors must implement policies in order to protect their citizens' rights against climate crisis, which represent a huge threat both directly and indirectly for human rights, which underlie the broader concept of public health.[175]

2.12 Public health protection in a polycrisis context

The contemporary geopolitical landscape characterised by a confluence of multifaceted crises, is definable as a polycrisis, marked by the concurrent existence of various forms of conflict, climate changes, economic shocks, and the repercussions of the ongoing Covid-19 pandemic. [176]

The novelty of the present social context is the coexistence of these multiple and heterogeneous adversities, situation that is generating a sort of polycrisis with many different sides. Think for example to the situation in Ukraine after the 2022 Russian

[173] Ibidem, p.6
[174] Ibidem, p.8
[175] Ibidem, p.9
[176] Martelli, S., Il peso di conflitti e shock climatici: il 2024 sarà l'anno della crisi alimentare? Climate Change, *Il Sole 24 Ore*, p.69.

invasion. Being the biggest wheat producer in Europe, the consequences deriving from the conflict had repercussions on the energy and fertilizers markets, evidencing, beyond the food insecurity situation, the different kind of impacts that threats to food production can represent in other economic and financial markets. [177]

Moreover, evidenced the strong interconnection and interdependence among different national markets, the implementation of policies aiming to increase public health level cannot be bounded by national borders. In fact, article 2, paragraph 1 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) provides the necessity to achieve a progressive and full realization of public health policies and programmes. The article indirectly provides the necessity for Governments cooperation, where the richer and most developed nations have the moral obligation to help the less developed ones.[178]

In terms of international cooperation, research calculated that to reach the UN Agenda 2030 SDG 3, that deals with good health and well-being for all, and that will be deeply analysed in the third chapter of this thesis, will cost about 371 billion US dollars. A huge expenditure, characterized by the opposition of two counteracting forces. On the one hand, the protection of human rights and public health, without any distinction, and in this case without any different treatment due to nationality. On the other hand, the drive of nationalist governments, which, to protect economic interests, tend through their policies to limit public health projects to the benefit of their own citizens and, obviously, limited within their own national borders.[179]

In case of absence of any medical solution, such as vaccines and antivirals, classical public health management measures and programmes are fundamental in order to limit the spread of contagion. In many cases a strong debate arose from the application of such measures, due to the fact that limitation of free movement of people had been considered as a sort of limitation of human rights, both from an individual and a collective point of view. In recent history, most recently during the Covid-19 pandemic, liberties and freedom that have been gained over the centuries have been limited in few hours

[177] Ibidem, p.71
[178] Ibidem, p.101
[179] Ibidem, p.103

depending on government decisions. Despite the clear public health purpose underlying such kinds of undesirable restrictions, numerous have been the protests and the social movements against those policies.

Isolation, so, the separation of ill people, and quarantine, intended as the isolation of those presumed to be infected by a contagious disease, began to be measures on the political agenda, limiting, during the pandemic, the daily activities of millions of free citizens. Through these measures of social distancing, the final aim of the governments was that of limiting contacts among citizens in order to contain the spread of the contagion and, consequently, to protect public health. Such measures are difficult to implement, specifically due to the consequent situation characterised by a paradigm, clearly resumed by the following quotation:

> "[*E]thically more challenging with individual human rights weighing against the public health imperative*".[180]

In the following table are reported the definitions and the principal characteristics of the major and most well-known non-medical public health interventions in limiting the spreads of contagion among the population.

[180] Wilder-Smith, A., Freedman, D.O., 2020. Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. *Journal of Travel Medicine*, 2020, p.2

Table 1. Non-pharmaceutical public health interventions to control infectious disease outbreaks, adapted from Cetron and Simone[5]

	Definition	Objective	Setting	Challenges	Remarks
Isolation	Separation of ill persons with contagious diseases from non-infected persons	To interrupt transmission to non-infected persons	Effective for infectious diseases with high person-to-person transmission where peak transmission occurs when patients have symptoms	Early case detection is paramount	Largely ineffective for infectious diseases where asymptomatic or pre-symptomatic infections contribute to transmission
Quarantine	Restriction of persons who are presumed to have been exposed to a contagious disease but are not ill, either because they did not become infected or because they are still in the incubation period	To reduce potential transmission from exposed persons before symptoms occur	Quarantining is most successful in settings where detection of cases is prompt, contacts can be traced within a short time frame with prompt issuance of quarantine	Quarantined persons will need psychological support, food and water, and household and medical supplies	Financial compensation for work days lost should be considered Voluntary is preferred over mandatory quarantine, but law enforcement may need to be considered if quarantine violations occur frequently
Community containment	Intervention applied to an entire community, city or region, designed to reduce personal interactions and movements. Such interventions range from social distancing among (such as cancellation of public gatherings, school closures; working from home) to community-use of face masks to locking down entire cities or areas (cordon sanitaire)	To reduce intermixing of unidentified infected persons with non-infected community members.	Social distancing is particularly useful in settings where community transmission is substantial	Ethical principles and codes are needed to guide community containment practice and policy Community containment to protect the population's health potentially conflicts with individual rights of liberty and self-determination	Law enforcement is needed in most settings. Therefore such restrictive interventions should be limited to the actual level of risk to the community

Source: Wilder-Smith, A., Freedman, D.O., 2020. Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. Journal of Travel Medicine, 2020, p.3

Accordingly, it is clear from what has been said above how the protection of public health frequently represents a sort of trade-off negatively affecting human rights, both individually and collectively. The relationship between public health and human rights is not easy to respect, despite being in a positive interdependence.[181]

[181] Toebes, B. et al, 2020. Toward Human Rights-Consistent Responses to Health Emergencies. *Harvard School of Public Health/François-Xavier Bagnoud Center for Health and Human Rights,* December 2020, Vol. 22, No. 2, SPECIAL SECTION: Big Data, Technology, Artificial Intelligence and the Right to Health (DECEMBER 2020), pp. 99 112

2.13 The Social Determinants of Health (SDH)

A fundamental aspect to consider while focusing on public health are the Social Determinants of Health (SDH). The World Health Organization defined the SDH as

> *"[…] the circumstances in which humans are born, develop, live, earn, and age. At the international, regional, and state or local levels, the distribution of money, power, and resources shapes these circumstances".*[182]

Through a broad consideration about Social Determinants of Health it can be reached both an increase in wellbeing and an inequality reduction among the citizenries. Moreover, well-designed economic and social policies represent the best instruments in order to deal with SDH implementation.

As reported in the first chapter of this thesis, Rudolf Virchow was a forerunner in developing the concept of the strong relation between socio-economic status (SES) and public health, thanks to his studies on the plague outbreak in Prussia. In that scenario, he had been able to identify SDH and Socio-economic Status (SES) as some of the principal causes of the contagion spread, that represented a novelty for the epoch. The detrimental living conditions of the most marginalised strata of the population have been recognised to be one of the core factors facilitating disease spread among the citizenry".[183]

Accordingly, I would like to briefly report a famous event able to evidence the importance of the role played by the SDH, in this specific case within the London urban context. While dealing with public health issues applied to the urban context, a particular event happened in the nineteenth century London can clearly represent how a fast and well-coordinated reply by the policymakers through an efficient system had represented an efficient solution, able to save citizens lives and create a more reliable city, in this case, London.

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[182] Chelak K, Chakole S (January 05, 2023) The Role of Social Determinants of Health in Promoting Health Equality: A Narrative Review. Cureus 15(1), p.1
[183] Ibidem, p.1

As reported in the first chapter of this thesis, until the first years of the twentieth century, the main cause of diseases diffusion and spread was thought to be the air. This theory, called "miasmatic theory", claimed that the main vehicle of contagion was the air breath by the population.

A statement of July 1844 by Professor Booth clearly explained what the concept of miasma in those years was compared to:

"From inhaling the odour of beef the butcher's wife obtains her obesity."[184]

Adopting the same concept, in 1842, Sir Francis Head, colonial Governor in Canada, agreed with and sustained the miasmatic theory, reporting that numerous urban settlements in the new colonies had been rendered dangerous for the citizens because of the remains of plants left decaying in large quantities in the soil. The absence of any form of management of those wastes had resulted in the smell resulting from the decomposition of these garbage abandoned on the ground spreading an unbearable odour, which was considered to be the carrier of disease.

Until 1858, in fact, the theory of Dr. Snow, so, the concept that water was one of the main vehicles of contagion among the population, even more risky and dangerous than contaminated air, was not esteemed to be true.[185]

Willam Farr (1807-83).

Source: Halliday, S. «Death and Miasma in Victorian London: An Obstinate Belief». *BMJ*, vol. 323, fasc. 7327, December 2001, pag.2

Consequently, until 1858 the miasmatic theory was thought to be the main one, and the one most recognised as reliable by academics, politicians and, so, by the general public. Therefore, the main objective from a public health policy perspective was the development, as far as the London city context was concerned, of a sewerage system capable of removing waste, and its deriving odours, or rather miasmas, from the built-up area by displacing the currents of the river Thames. The London sewage system based mainly on the removal of urban waste using the currents of

[184] Halliday, S. «Death and Miasma in Victorian London: An Obstinate Belief». *BMJ*, vol. 323, fasc. 7327, December 2001, p.1. Available at: https://doi.org/10.1136/bmj.323.7327.1469
[185] Ibidem, p.1

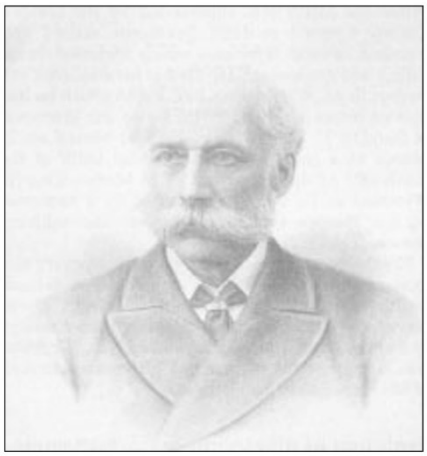
the river Thames was efficient, or rather, it was considered to be efficient and reaching the standards of the time until 1858. In that year, an abnormal heat wave occurred in the capital, which, coupled with an extremely hot summer, caused the level of the Thames to drop considerably, causing all the urban wastes thrown in it to return to the surface. Even the "*Times*" called this event "*The Great Stink*".[186]

The rapid and efficient reply from the policymakers was principally due thanks to the proximity of the river, and the relative odour emanating from it, to the Parliament, which was housed in Buckingham Palace. The smell was such that parliamentary works were suspended, principally due to the fear of the capacity of the miasma to spread contagious diseases among the Members of the Parliament.[187]

Dr Snow's studies showed that mortality and contagion were much higher in areas and neighbourhoods of London where the drinking water and provision of the population came from water taps connected to antiquated and unsafe sewers. Despite that, as reported above, the scientific and political community disagreed with Doctor Snow's vision until the year of his death, in 1858.[188]

The turning point came in 1866, when Dr Willian Farr investigated the last cholera epidemic in London. Farr realised that the only part of the population to be badly affected was the one living in Whitechapel, the only area not yet connected to the Bazalgette system.

[186] Ibidem, p.1
[187] Ibidem, p.2
[188] Ibidem, p.2



Sir Joseph Bazalgette (1819-1891).
Source: Halliday, S. «Death and Miasma in Victorian London: An Obstinate Belief». *BMJ*, vol. 323, fasc. 7327, December 2001, pag.3

Between 1859 and 1875, the engineer Bazalgette designed and implemented a sewage system that could contain urban waste by not allowing it to flow into drinking water sources that would be used to quench the thirst of Londoners. Farr recognised that the main factor influencing mortality was the efficiency of the Bazalgette sewage system.[189]

The final proof that Bazalgette system was efficient, and therefore that the main factor of contagion was water and not air, came in 1892. Hamburg, one of the major economic centres with which London traded, was hit by a cholera epidemic. In London, the evidence showed that although the air was still unhealthy, the presence of clean water through the implementation of the new sewage system devised and implemented by engineer Bazalgette was effective in protecting London and its citizens.

Due to the uncontrolled and unmanaged population growth in London, its obsolete sewage system proved insufficient to deal with the huge increase in urban waste that were, at the time, directly poured in the Thames.

From 1831 onwards, until the period between 1854 and 1858, with Doctor Snow's observations and the occurrence of the so-called Great Stink, London suffered from numerous cholera outbreaks, but until 1858 these were attributed to poor air quality, again in accordance with miasma theory.[190]

The unbearable stink deriving from the waste poured in the water rapidly become clear to represent a menace to public health. Furthermore, it is important to point out how an invention of the time in terms of public health worsened, indirectly and through its use,

[189] Ibidem, p.3
[190] London's 'Great Stink' of 1858: how a rapid policy response stopped the stench. *Rapid Transition Alliance,* 10 May 2023. Available online at: https://rapidtransition.org/stories/londons-great-stink-of-1858-how-a-rapid-policy-response-stopped-the-stench/

the hygienic situation of the Thames. The bathroom flushes, in fact, presented at the Great Exhibition of 1851, exponentially increased the discharges into the waters of the Thames, directly from the homes of Londoners.

The fear of the population about the spread of the disease and the death and, furthermore, the direct and unique impact that such a drastic public health situation had on Buckingham Palace Parliamentary activity made it possible a rapid policy makers response, in order to solve this drastic situation. The project for a new sewage system was rapidly implemented and well financed, proved also by the words reported in the *Observer Newspaper*:

> *"[E]very penny spent is sunk in a good cause"* to create the *"most extensive and wonderful work of modern times".*[191]

The project that was implemented, that of the engineer Bazalgette, proposed a series of sewers on various levels that would separate drinking water from wastewater, discharging the latter at a point away from the centre of the British capital.

Despite the enormous progresses in terms of public health, the numerous losses from the social point of view must be highlighted. Entire communities were forcibly relocated in other areas of the capital, and entire neighbourhoods were demolished in order to proceed with the works, creating displacements of large masses of the population without a specific demographic plan and design, creating enormous hardship among the displaced population and those indirectly affected.

In conclusion, the effective and rapid response took in order to deal with this unique public health crisis in the 1858 London was possible through a fast and coordinated response by policymakers, public investments and, last but not least, a change in the scientific vision. The miasma theory was abandoned in favour of the evidence that also water, and not exclusively air, was the principal cause of disease diffusion among the population. In addition, the health crisis caused by the Great Stink gave rise to the management of municipal wastes, sewage treatment, and public health policies primary attention by political arenas. This gave start to the growing focus on health and public

[191] Ibidem

health policies, highlighting the need for rapid responses programmed in a long-term view.[192]

While dealing with public health emergencies the historical file-rouge that have proven to be able in providing effective and efficient solutions is governmental intervention, acted through public health policies and programmes with a systemic approach. While dealing with public health issues,

> *"[T]he most significant health factors include government policy, medical availability, individual behavioural choices, and biological and genetic features".*

Furthermore, a coordinated, systemic and well-structured response would represent, if a set of preventative measures would reveal not sufficient, the only solution that a government could advance while dealing with such a complex matter as that of public health.

While writing about the topic of public health it must be highlighted the importance of the Social Determinants of Health (SDH), in particular of socio-economic nature, influencing health and life quality. The increasing importance vested by those non-medical factors in shaping political responses to public health issues highlights how health and public health are both deeply affected by components that do not find their core in science and medicine. Here follows a table with a brief scheme relating to the principal SDH, divided into four main categories of different nature, that are economy, basic needs, social and environmental ones.

[192] Ibidem

Economic stability	Necessities	Demographics and social context	Environmental
Employment status	Safe, secure, quality housing	Gender identity/inequality	Crime rate/violence
Income level	Access to affordable, healthy food options	Sexual orientation/discrimination	Access to transportation
Health insurance status	Access to clean drinking water	Ethnicity/racism	Safety of the built environment
Expenses	Air quality	Cultural identity	Parks, green space
Financial safety net	Utilities (heat, etc.)	Language barrier	Recreational and leisure opportunities
		Immigration status	Availability of healthcare
		Social network, capital, and support	

Source: https://www.christenseninstitute.org/

Instead, the socio-economic context plays a core role in influencing public health, affecting the context within which people live. Several studies in the last decades have evidenced how the educational level represents one of the main drivers while analysing public health. In a situation of endowment parity, communities with higher educational levels result to be less affected by the numerous challenges faced by our society, such as unemployment, non-communicable diseases (NCDs) diffusion, and environmental degradation. Accordingly, income, education and employment represent three of the main SDH that are not directly related to medicine and scientific progresses but that are strongly related to public health levels.[193]

The limits of scientific and medical progress are witnessed by the research proposed by the Scottish physician, Thomas McKeown. Focusing on the United Kingdom context of the half nineteenth century.

> *"[H]e found that mortality from multiple causes had fallen precipitously and steadily decades before the availability of modern medical-care modalities such as antibiotics and intensive care units".*[194]

[193] Braveman, Paula, e Laura Gottlieb. «The Social Determinants of Health: It's Time to Consider the Causes of the Causes». *Public Health Reports*, vol. 129, fasc. 1_suppl2, January 2014, pp.19-31
[194] Ibidem, p.2

He observed that this fallen levels of mortality derived from the better social and economic situation that started to characterize urban context after the First Industrial Revolution during the second half of the eighteenth century. At the same time, actors active in social protection, such as communities and families, could help in mitigating the negative impact of some Social Determinants of Health.[195]

Considering public health and the right to health as human rights, any violation, such as health inequalities, can be considered as human rights violations. The idea of seeing health rights as human rights is backed also by the legislative progresses undergone by health and public health in the last decades. In 1948, with the UDHR, the right to health had been widened in its conception, passing over the limited definition of health as medical care and starting to include in its definition and conceptualisation also other fundamental factors, such as standard of living, food security, sanitation and education. The consciousness of the importance of a systemic vision while developing and implementing public health policies and programmes, and the consequent core role vested by the context, made it clear that creating social conditions was as important as the scientific and medical aspects.

Moreover, with the creation of the ICESCR in 1966, the concept of right to health widened increasingly, encompassing the concept that health was definable as "the highest attainable standard of health", increasing the importance vested by SDH factors.[196] In 1978, with the Alma Ata Declaration, the fundamental importance of SDH has been renovated, with primary health care, education, nutrition, sanitation and disease prevention being intended with a primary role in human rights protection.

Nowadays, the General comment by the UN Committee on Economic, Social and Cultural Rights (CESCR), widened the concept of right to health, enriching it with the inclusion of housing, healthy environment and education. Furthermore, it established four pillars for health systems.

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[195] Ibidem

[196] Meier, M. M., et al, 2010. "Rights-based approaches to public health systems". *Springer Publishing Company*, New York.

The first is represented by availability, so, a fair number of services and resources granted to all the population. Second, accessibility, intended as the elimination of any type of barrier limiting the free access to health services and resources. Third, acceptability, intending that services must be appropriate and ethical for the society. Fourth and last, quality, so, adequate to scientific and medical standards. Seeing health inequities from a right-based perspective increase states and other stakeholders initiative and attention towards public health measures.

Furthermore, according to the words of author Hunt,[197] it is important to mind the risk represented by the integration of right to health within the wider concept of human rights. The risk is that of marginalizing and reducing the core objective of the right to health, by including it within a more complex and wider framework, so, that of human rights. Being characterised by particular elements, such as progressive implementation, the limitation of the resources and the necessity for international cooperation, the right to health represent a "*sui generis*" human right, that must be seen within the wider framework of human rights while, at the same time, preserving its unique specificities.

[197] Hunt, P., et al., 2010. "Health systems and the right to the highest attainable standard of health", in Meier, M. M., et al, 2010. "Rights-based approaches to public health systems". *Springer Publishing Company*, New York.

CHAPTER 3: Public health future-oriented vision: analysis of two concrete programmes

3.1 The future of public health: a new consciousness

I would like to start this third chapter reporting two quotations of experts in the sector of urban development and public health.

> *"If the purpose of urban planning is not for human health, then what is it for?" Doctor Maria Neira, WHO Director, Department of Environment, Climate Change and* Health.[198]

> *"Urban and territorial planning is a vehicle for health improvement […]" said Doctor Shipra Narang Suri, UN-Habitat Chief of Urban Practices.*[199]

This third and last chapter aims at proposing a future oriented vision about public health, so, leaving behind the mere economic and financial interests moving governmental actions in public health field, in order to grant a sort of equilibrium in trade among port cities, while adopting measures more focused on the centrality of the citizens, of their life-quality and the social and human rights sphere. In the past, a fundamental aspect have been recognised, and that in particular nowadays is ever more enhanced. This is the cooperation among nations, without which a full, effective and efficient answer to public health crisis, as the recent one of Covid-19, can not be reached.

So, using the term "future-oriented vision", it is intended to apply the findings of the development path undergone through the epochs by the concept of public health, and furthermore, to underline the systemic approach that such a complex topic as the one of public health is vesting in our epoch. The awareness that a systemic approach nowadays plays, and in the future will increasingly represent, a real necessity and a fundamental

[198] Urban planning crucial for better public health in cities. *WHO*, May 2020, p.2
[199] World Health Organization. Health as the Pulse of the New Urban Agenda: United Nations Conference on Housing and Sustainable Urban Development, Quito, October 2016. World Health Organization, 2016. WHO IRIS, https://iris.who.int/handle/10665/250367, p.2

role in order to develop a public health able to use all the different synergies coming from the cooperation and collaboration among different sectors and stakeholders influencing on and working in public health, is ever clearer in our society, both among citizens and among decision-makers. Furthermore, the awareness that public health policies, in order to reach their goals, need to be programmed in a long-term, better evidence how a future oriented vision will clearly help while working on public health issues, evidencing how public health policies objectives will impact more future generation than the present ones, due to their long realisation time framework.

In particular, this future oriented vision will propose and highlight two main areas of analysis developing, in turn, two of the main issues treated in the first historical chapter, that are, respectively, information management and urban planning.

So, the decision to dedicate the final chapter of this thesis to these two fundamental aspects of public health, that are, again, information management and urban planning, is rooted in the underlying objective of providing a comprehensive overview of the evolutionary path undergone by the concept of public health.

While the initial chapter of the thesis is oriented towards a historical analysis, the second chapter focuses on contemporary issues. The third chapter, instead, adopts a forward-looking perspective, proposing both an abstract theoretical framework and a practical, concrete approach to the concept of public health. This chapter also puts forward two ambitious projects spearheaded by the United Nations (UN) and the European Union (EU).

The first part will illustrate the ambitious goal advanced by the European Union in order to establish, in the near future, the so-called European Health Union (EHU). The main objective of this new union will be that of increasing and protecting the health of the European citizens enhancing Member States cooperation and coordination, under the guidance of the European Union (EU). This goal is supposed to be reached through one of the main determinants that have already been recognised as fundamental during the plague epidemic in Venice in the fourteenth century, so, through a good and well-structured share and management of health information. During the Covid-19 pandemic

it become clear that the only way to limit the expansion of those invisible enemies was through cooperation among political and medical institutions of the numerous countries affected. Differently to other threats, pandemics could not, and still today cannot be considered as threat limited by national borders. A constant monitoring activity need to be implemented in order to limit the diffusion of the virus. The European Union played a leading role during the Covid-19 pandemic, and furthermore it had been recognised as a pioneer in the emergency management through the political measures that it had implemented.

Furthermore, as will be evidenced in the first part of this chapter, many of the instruments and solutions provided by the European Union were created and implemented in the past, obviously in a simpler way, so, they did not represent a novelty, if not relatively to the scientific advancements and to the worldwide scale of the Covid-19 pandemic.

Moreover, the second part of the chapter will instead deal with the well-known UN programme 2030 Agenda for Sustainable Development , adopted in 2015 by all the 193 UN member states. Its objectives are those of ending poverty, protecting the planet and ensuring peace and prosperity for everyone. Composed by 17 Sustainable Development Goals (SDGs) and 169 targets, this chapter will mainly focus on two of those SDGs, strongly related with the topic of public health. Those two goals are the SDGs number 3 and number 11.[200]

Despite the cross-cutting approach to public health that all the 17 SDGs of the Agenda 2030 have, adopting a narrow vision, the selection of SDGs 3 and 11 is clear because of their strong relationship with the public health theme.

SDG number 3, called “Good health and well-being” is dedicated to the elimination of any type of barrier limiting the access to a better life by the less wealth social classes. SDG 3 strongly provide for the institutional intervention in order to help population, or better, citizens, to enjoy a better life and to reach better living conditions while eliminating any type of discrimination among different nations and, in particular, within the same

[200] ONU website, available at https://unric.org/it/agenda-2030/

nation and the same society. Referring to what have been treated in the first chapter of this master thesis, it is possible to note how already in the fourteenth century Venice, the call for strong institutional and political powers was deemed necessary in order to legislate, finance, and implement political measures to help the population.

Furthermore, being cities the main places were population live and economic activities develop, their management is fundamental in order to protect and implement public health. For this, SDG 11 represent the second fundamental goal advanced by the UN Agenda 2030, that is strongly related to public health protection. Called “Sustainable cities and communities”, its main objective is that of “Make cities inclusive, safe, resilient and sustainable”.

As it was recognised during the plague in the fourteenth century, human settlements were considered as significant hotbeds of disease due to their high population density, which resulted in numerous contacts between citizens. In addition to this, human settlements were the focus of economic, social and political life, and therefore had to be protected.

While these urban context characteristics persist to the present days, the primary objective has changed and is now approached from a more social perspective. The guarantee of a high standard of living is, nowadays, the overarching purpose of public health policies, with cities representing a primary context, being considerable as laboratories where to develop and implement public health measures, also due to their strategical role within the society.

In conclusion, the present chapter proposes the transposition to the contemporary era of what was already recognised in the early modern age Venice for being fundamental in guaranteeing the protection and development of public health within the Venetian Republic. The chapter also highlights how, nowadays, the core objective of public health measures has evolved beyond the mere preservation of port-cities' mercantile, economic and financial hegemony, to the protection and safeguarding of citizens, representing the primary assets of a city within the urban contexts, through public health measures.

3.2 Public health in the European Union

This first part aims to highlight the efforts undergone by the European Union and its institutions in order to reach the ambitious goal of developing the concept of public health by creating a European Health Union (EHU) that will grant more coordination and integration in public health issues, with the final objective of giving better standard of living to European citizens. The concept of public health, according to the words of Charles-Edward Amory Winslow (1920) can be defined as

> *"[…] the science and art of preventing disease, prolonging life, and promoting physical health and efficiency through organised community efforts aimed at environmental hygiene, controlling infectious diseases, educating the individual in the principles of personal hygiene, organising medical and nursing services for the early detection and preventive treatment of disease, and developing a social apparatus that ensures that every individual in the community has a standard of living adequate to maintain health".*[201]

While, as I have reported in the first chapter focusing on the public health management in the early modern times Venice, in the past public health was intended as the mere organisation and administration of regulations and laws within a specific territory in order to grant the continuity and safety of commerce and trade, nowadays the concept has undergone a sort of evolution. Our society refers to public health both as an individual and a collective right, a right that is essential for each citizen.

One of the most recent initiatives that can be cited in order to make clear the importance that public health have in our society is the creation of the UN Agenda 2030, that, with its 17 SDGs (Sustainable and Development Goals), aims at creating a more free, just and equitable world within 2030. Furthermore, in Italy, with the Constitutional Law n.1 of February 2022, on "Amendments to Articles 9 and 41 of the Constitution on environmental protection", two constitutional articles have been amended, in order to make the Italian Constitution more updated about two topics that nowadays are on the top

[201]Winslow, C. E. A., 1920. The Untilled Fields of Public Health. In: Delogu, G., 2022. Inventing Public Health in the Early Modern Age: Venice and the Northern Adriatic.

of the international agenda, that are, respectively, the protection of the human health and of the environment, with a focus on the future generations.[202]

The recurrent health crises, as the last one of Covid-19 that has undermined the world economic and social sphere, have evidenced the necessity to increase cooperation among the states, and in particular among those Member States composing the European Union.

Understood the necessity of increasing cooperation in order to deal with invisible enemies that do not respect national borders, the European Union is undergoing several efforts in order to implement the ambitious goal of an integrated public health organisation within its Member States borders.[203]

One of the fundamental documents able to take this path to the success is the Lisbon Treaty. Signed in December 2007 and entered into force in December 2009, the Lisbon Treaty amended two of the fundamental treaties of the European Union, that are, respectively, the Treaty on the European Union (TEU) and the Treaty on the Functioning of the European Union (TFEU), that governed, and still today governs, the functioning and powers of the European Union. These two Treaties represent a kind of European Constitution, and, being such a bulwark for the Union, the Lisbon Treaty, amending the TFEU, played a fundamental role. Briefly, the principal amendments were about the regulation of the function of European Union institutions and of the European Union competencies and powers.[204]

Moreover, the Lisbon Treaty reports that all member states policies must enhance the wellbeing of their citizens, aiming at getting "a high level of health protection", although in several issues the Union role is limited to that of complementing what lacks in the single national policies and regulations, and can only operate to increase cooperation, integration and the sharing of information, data, tools, skills, medical and emergency personnel.

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[202] Bartolucci, L., Le "future generazioni" sono entrate in Costituzione. Conseguenze giuridiche e politiche. *Luiss*. Available https://sog.luiss.it/sites/sog.luiss.it/files/LUISS_SOG_policybrief%2009_22.pdf

[203]Duncan, B., 2002. Health policy in the European Union: how it's made and how to influence it. *BMJ*, Volume 324, pp. 1027-30.

[204]European Parliament website. Fact Sheets on the European Union. Available at: https://www.europarl.europa.eu/factsheets/en/sheet/5/the-treaty-of-lisbon

For example, while legislating on policy areas such as those concerning the Common Agricultural Policy (CAP),[205] public health concerns several aspects of the Union policies, and one of those subjects that immediately catches the eye for being strongly linked to the public health is the internal market.[206]

3.3 The road to a European Health Union (EHU): first steps

One of the first steps in trying to create a common European health policy came with Article 129 of the Maastricht Treaty of 1992. While evidencing the duty for the then Community to support and coordinate health projects, at the same time it highlighted the ban for the EU to interfere and harmonize national health policies. Another important feature of the article, highly relevant from a social perspective, was the claim to increase efforts in diseases prevention.[207] Analysing some other numerous documents concerning public health and legislation in the EU, it is clear the difficulty that EU institutions and agencies have to face while policing and legislating on such a complex and delicate issue. National governments do not want any interference regarding such policies, since the issue of health is one of the most wide and delicate, closely affecting the lives of their citizens. Despite that, being aware that health issues are not bounded by national borders, cooperation has started to being deemed necessary.

Taking example from the past, information management has been posed at the top of the priority list while moving the first steps to implement a well-endowed European public health project. So, in order to improve cooperation, some member states are trying to improve a single and common health database, through which they can share information and control health situation in other countries.[208] One of the first times health has been

[205]Ibidem
[206]German Federal Ministry of Health, 2023. European Health Policy - Progress through diversity. Available at: https://www.bundesgesundheitsministerium.de/en/international/european-health policy#:~:text=European%20health%20policy%20is%20premised,financing%20and%20scope%20of%20services
[207]Duncan, B., 2002. Health policy in the European Union: how it's made and how to influence it. *BMJ*, Volume 324, pp. 1027-30.
[208] Cvahte, J., & Primec, A. (2024). EU Health Union: Legal Aspects and Digital Health. *Naše gospodarstvo/Our Economy*, 70(1), 24-33.

recognised by member states as a common pillar within Europe was with the creation of the common market and the establishment of the free movement of people, goods and services. Making in this way national borders more flexible, the idea of the necessity for a common health policy started to spread. Already in 1986, the Single European Act stated that "a high level of protection of people's health" must be at the centre of all European policies, clarifying the importance that public health started to have within the European context.[209] This principle, known as "Health in All Policies" (HiAP) is a fundamental approach adopted by EU policies, that not only asserts that in all EU legislative programmes citizens health must be protected and respected, but also that a systemic approach must be adopted, because numerous are the external factors that affect health of the individuals and, consequently, public health.[210]

Nowadays, in fact, people are ever more aware that the concept of health does not refer only to their physical and psychological condition, but it entails also other aspects, such as the environment, the society, and all the other factors influencing the context in which an individual live.[211] Following this wake, the concept of "public health" has widened in the last decades.

This "development path" has given origin to some new concepts, for example those of One Health and Global Health.[212] Such theoretical and ideological innovations certainly contributed to the conception of the "Agenda 2030", promoted by UN, that, with its 17 SDGs, has set the ambitious goal of creating a more equal, free and accessible world within 2030. The historical re-elaboration of the concept of health and public health has involved all the stakeholders active in the management of health systems, which have understood the necessity of treating illnesses and diseases also from a social point of view, then only from a medical perspective, giving to prevention a fundamental role in achieving a full health and wellbeing.

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[209] Ibidem
[210] Nabbe, M., Brand, H. The European Health Union: European Union's Concern about Health for All. Concepts, Definition, and Scenarios. *Healthcare 2021*, 9, 1741.
[211] Ibidem
[212] Coli, F., Schebesta, H., 2023. One Health in the EU: The Next Future? *European Papers* Vol. 8, 2023, No 1, pp. 301-316. Available at: https://www.europeanpapers.eu/it/e-journal/one-health-eu-next future

Continuing the analysis of the knowledge and awareness that the past has bequeathed us, within its policy-making activities, the European Union recognises the importance of preventative measures, affirming the double role of public health policies, that are, those of prevention and treatment of diseases.[213] Analysing the EU context, the institutions that mainly deal with health policies are the European Commission and the Directorate-General for Health and Food Safety (known as DG Sante).

The very first proposal for the development of a European Health Union, in fact, come from the President of the European Commission, Ursula Von Der Leyen, in 2020.[214] In that year, Covid-19 pandemic was spreading all around the world, making everyone being aware that health policies cannot be bounded by national borders, and that cooperation and integration were fundamental factors in order to gain the correct resources, tools and institutions to fight pandemics related invisible wars.

The project for a European Health Union (EHU) is both a complex and ambitious one, and one of its most important pillars will be the European Health Data Space (EHDS).[215] A data space of this kind, which first creation proposal has been published in 2022, will represent one of the first data space focused on public health data storage. Creating the "European Health Data Space would offer two main big advantages, which will be, respectively, facilitating the exchange and sharing of data of the single patient and creating a big database from where researchers could find available data by only accessing a single dataspace".[216]

Furthermore, on the path to obtain a European Health Union, some other important steps towards achieving it have been about the establishment of the European Centre for Disease Prevention and Control (ECDC) and of the European Health Emergency Preparedness and Response Authority (HERA). On the one side, the European Centre for Disease Prevention and Control, established in 2005, "collects, analyses and shares data

[213]Cvahte, J., & Primec, A. (2024). EU Health Union: Legal Aspects and Digital Health. *Naše gospodarstvo/Our Economy*, 70(1), 24-33.
[214] Nabbe, M., Brand, H. The European Health Union: European Union's Concern about Health for All. Concepts, Definition, and Scenarios. *Healthcare 2021*, 9, 1741.
[215] Cvahte, J., & Primec, A. (2024). EU Health Union: Legal Aspects and Digital Health. *Naše gospodarstvo/Our Economy*, 70(1), 24-33.
[216] Bundesministerium für Gesundheit, 2023.

on more than 50 infectious diseases. ECDC experts assess risks to Europe and provide guidance to help countries in preventing and responding to outbreaks and public health threats".[217] On the other side, the European Health Emergency Preparedness and Response Authority, established in 2021 by the European Commission[218], aims at "anticipating threats and potential health crises, through intelligence gathering and building the necessary response capacities"[219], and is also in charge of managing the production and distribution of all the products necessary during an emergency.[220] Under the guidance of European Commission, the European Medicine Agency (EMA), the ECDC and the HERA represent the three main European institutions created in order the strengthen the role played by the European Union in managing health programmes and threats within the member states.[221]

Some other fundamental functions promoted by those institutions are, for example, the "Early Warning and Response System", which, implemented by the ECDC, permits to share online health information in order to keep national health systems updated. This system highlights the importance that the EU gives to preventative functions instead of focusing only on reactive responses to epidemic and other public health threats.[222]

Moreover, other core institutions that help regulating consumer and health protection, in addition to helping to reach what has been stated in Article 168 (4) Treaty on the Functioning of the European Union (TFEU), which provides that high and common quality and safety standards shall be established, are the European Food Safety Authority

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[217] ECDC website. Available at: https://www.ecdc.europa.eu/en

[218] German Federal Ministry of Health, 2023. European Health Policy - Progress through diversity. Available at: https://www.bundesgesundheitsministerium.de/en/international/european-health policy#:~:text=European%20health%20policy%20is%20premised,financing%20and%20scope%20of%20services

[219] European Commission website. Available at: https://commission.europa.eu/about-european commission/departments-and-executive-agencies/health-emergency-preparedness-and-response authority_en

[220] German Federal Ministry of Health, 2023. European Health Policy - Progress through diversity. Available at: https://www.bundesgesundheitsministerium.de/en/international/european-health policy#:~:text=European%20health%20policy%20is%20premised,financing%20and%20scope%20of%20services

[221] Cvahte, J., & Primec, A. (2024). EU Health Union: Legal Aspects and Digital Health. *Naše gospodarstvo/Our Economy*, 70(1), 24-33.

[222] Anderson, M., Mossialos, E., 2020. Time to strengthen capacity in infectious disease control at the European level. *International Journal of Infectious Diseases* 99 (2020) 263–265. Available at: https://www.sciencedirect.com/science/article/pii/S1201971220306317

(EFSA) and the European Chemical Agency (ECHA). Through these institutions, the European Union tries to give clear standards to the single stakeholders operating within European borders, while avoiding a direct intervention on national policies.[223]

Several legal acts had been adopted in order to get closer to the ambitious European goal for the establishment of the European Health Union (EHU). Four of them have been all adopted in 2022, and while having different aims, all were directed to the same objective. The "Regulation on a reinforced role for the European Medicines Agency" aims at a faster and more integrated management of medicines supply within the Union. The "Regulation on serious cross-border threats to health" aims at creating a threat monitoring system, able to respond, asses, and taking countermeasures as a common action. The "Regulation amending the Regulation establishing a European Centre for Disease Prevention and Control (ECDC)" points at enabling ECDC to manage emerging threats, provide surveillance and establish a network of reference. The fourth is the "Regulation on a framework of measures for ensuring the supply of crisis-relevant medical countermeasures in the event of a public health emergency at the Union level", regulation that wants to increase EU response and coordination to health crises, while permitting equal access to health goods and services. [224]

Some other steps taken by the EU aiming at creating a more equal, inclusive and safe health system at a European level has been, for example, the inauguration of the 2021 5.1 billion euros EU4Health project.[225] After Covid-19 pandemic, being always more aware of the necessity of cooperation among countries and their national health-systems, EU4Health programme represents a bulwark of the solutions that the European Union is trying to adopt in order to coordinate member states in granting to their citizens better living condition from a social and medical perspective. From a practical viewpoint, the main goals of this programme are the increased investments in research and prevention, the digitalisation of national health systems in order to enhance integration, and the

[223] Ziller, J., 2023. Advanced introduction to European Union Law. Second edition. *Edward Elgar Publishing*, pp. 50 - 51.
[224] Cvahte, J., & Primec, A. (2024). EU Health Union: Legal Aspects and Digital Health. *Naše gospodarstvo/Our Economy,* 70(1), 24-33.
[225] Samarasekera, U., 2021. New EU health programme comes into force. *World Report, Volume 397*. Available at: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00772-8/fulltext

research specifically against cancer.[226] In line with the inception of EU4Health programme, EMA's powers have been strengthened, in order to permit to the Agency to increase coordination within the Union, by taking action on the management of drugs and equipment shortages and promoting scientific research.[227]

3.4 EU interventions on pandemics management

Shifting from a European internal perspective to a more international and political one, while analysing the road to the European Health Union, the areas that have mainly been influenced are those of development of an information system, joint research, cooperation on cross-border diseases and free movement of patients. In responding to the Covid-19 pandemic the EU has been proficient, despite the several limitations that had to face. For example, GDPR (General Data Protection Regulation), regulating data protection and privacy of the citizens, or, better in this case, patients, could represent a limit in the sharing of information and data.[228]

Analysing the health policies and legislation about public health in the European and non-European context, it is possible to affirm that disease outbreaks and pandemics has been the best engines in order to make the European Union, or better, EU Member States, to move some steps towards cooperation, integration, and the creation of common policies and common standards.[229]

For example, the European Centre for Disease Prevention and Control (ECDC), has been established after the threats posed in 2003 by the Severe Acute Respiratory Syndrome (SARS). Again, the creation of a joint procurement of vaccines has been reached after the

[226] Ibidem
[227] Ibidem
[228] Anderson, M., Mossialos, E., 2020. Time to strengthen capacity in infectious disease control at the European level. *International Journal of Infectious Diseases 99* (2020) 263–265. Available at: https://www.sciencedirect.com/science/article/pii/S1201971220306317
[229] FleishmanHillard EU, 2020. EU4Health and the European Health Union. Available at: https://www.youtube.com/watch?v=JNNfzqjHJtQ

2009 swine flu epidemic.[230] As during Covid-19 pandemic, when some member states have to face some critical situations due to health and non-health related crisis, one of the principal EU framework that has worked to contrast emergency situations is the Civil Protection Mechanism (CPM), that can be defined as a match-making system able to make national institutions to communicate among each other and permits the sharing of assets, goods and services in case of emergency.

In 2019 this framework has been upgraded, under the name of RescEU, creating a common set of equipment.[231] This framework is an example of good health crisis governance and management within the European context, due to the good results achieved during the Covid-19 pandemic. Despite that, the EU potential has been strongly limited due to the bound posed to its competencies in health matters[232], and also due to the fact that power over health competencies is strongly defended by Member States.[233] Despite Covid-19 has shown that coordination and integration are fundamental features to win a sort of invisible war against pandemics, within the European Union, the political will of the single Member State is essential to reach this goal. Furthermore, despite the clarity of the aim that characterises this project, that is, more integration and coordination in order to offer better health standards and living conditions to EU citizens, the real powers and functions that will be conferred to the so-called European Health Union (EHU) are not clear yet.[234] To date, the most well-known definition of EHU is "European Union's concern about health for all", and, according to Nabbe and Brand, efforts of the participants to this programme must be directed to improve the share of information, coordination, the creation of a common database, prevention, and research.

[230] Brooks, E., & Geyer, R., (2020). The development of EU health policy and the Covid-19 pandemic: trends and implications, *Journal of European Integration*, 42:8, 1057-1076. Available at: https://doi.org/10.1080/07036337.2020.1853718
[231] Ibidem
[232] Ibidem
[233] Nabbe, M., Brand, H. The European Health Union: European Union's Concern about Health for All. Concepts, Definition, and Scenarios. *Healthcare 2021*, 9, 1741. https:// doi.org/10.3390/healthcare9121741
[234] Ibidem

3.5 The European Union as a model

Nowadays citizens, policy makers, and all the stakeholders that have a role within the political arena are ever more aware that in such an interconnected world, events are interrelated among them. Due to this consciousness, several terms and ideologies are spreading worldwide. As reported before, one of the most well-known of these new terms is “One Health”.

Developed in the 20th century, it provides a new vision in which human, animal and environmental health are all interconnected. To achieve the much sought-after wellbeing, modern society must stop following the mere economic wealth and should instead shift the focus towards other priorities. Dealing with these new concepts, it is interesting to evidence the role that they have within the EU legislative context. Research published in 2023 by authors Coli and Schebesta, shows us how the use of the concept of One health has rapidly increased within EU documents in recent years. While in 2017 the term has been used 11 times, in 2018 it was used 41 times, and again, in 2021, it was counted 116 times.[235] The document proposed by the two researchers concluded that today the concept of One Health is at the first stages of its development, being still principally focused on the Antimicrobial Resistance (AMR) issue, far from the expanded vision of the interrelation among human, animal and environmental health. The holistic view linked to One Health is still far to be reached, despite several are the projects that the EU is enhancing in order to reach the final stage that this still new concept proposes.[236]

Another important European Union initiative that can be mentioned is the Green Deal. It represents a European Union’s programme, strongly linked with the concept of “One Health”. In fact, both adopt a future-oriented vision, focusing on the wellbeing of the future generations, even though, despite the several uses of the concept of “One Health” provided by the Green Deal, the research beforementioned evidence how the concept of

[235] Coli, F., Schebesta, H., 2023. One Health in the EU: The Next Future? *European Papers* Vol. 8, 2023, No 1, pp. 301-316. Available at: https://www.europeanpapers.eu/it/e-journal/one-health-eu-next future
[236] Ibidem

One Health is still unclear, with changing meanings, aims and focuses depending on the communication analysed. [237]

The Brundtland Report of 1987, by giving a clear definition of sustainable development, paved the way for the vision advanced by the Green Deal and the One Health concept, highlighting how nowadays society must limit its consumption, and the damage it causes, in favour of future generations, those future generations to which efforts to achieve a European Health Union are dedicated. The Brundtland Report, in fact, defines sustainable development as

> *"a development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs"*.[238]

Despite the complexity surrounding the public health topic, in 2020 the European Commission announced that the first steps in order to create a European Health Union had been moved. To reach this ambitious goal, the Union has decided to strengthen the power of two health institutions operating within the Union, the European Centre for Disease Prevention and Control (ECDC) and the European Medicines Agency (EMA). It can be evaluated as a sort of informal way to increase EU pervasiveness in public health issues, so, by increasing the powers and the competencies of European agencies and institution, while avoiding the amendment of old treaties and the establishment of new ones.[239]

Furthermore, thanks to the several steps forward that the European Union has done in order to fight against the Covid-19 pandemic, nowadays the EU has reached a leading role in the international public health regulation scenario.[240]

While writing about the leading role EU is achieving about public health management internationally, it is important to highlight some legislative aspects. Art. 21 TFEU, about

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[237] Ibidem
[238] EUR-Lex Website. Judgment of the Court of 20 February 1979. Case 120/78. Available at: https://eur lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A61978CJ0120
[239] Brooks, E., & Geyer, R., (2020). The development of EU health policy and the Covid-19 pandemic: trends and implications, *Journal of European Integration,* 42:8, 1057-1076. Available at: https://doi.org/10.1080/07036337.2020.1853718
[240] Ibidem

free movement of the citizens, was necessary while legislating about the creation and the implementation of the so called "green pass", the EU Covid-19 certificate, that represented an effective public health measure admired by many non-European international actors. Despite article 168 TFEU and article 9 TFEU provide protection of public health within the EU, with the important results reached internally the Union has achieved a primary and leading role also in the international scenario.[241] Being clear that public health is a multilateral topic, the EU, that, as reported before, nowadays represents an institution vesting a model role in the matter of public health, must promote the idea of the necessity of a multidimensional approach, where public health is not only identified by physical or psychological health, but also by cybersecurity, artificial intelligence regulations, lifestyles, working conditions, the environment and many other factors that everyday affect what can nowadays be defined "public health". It is not possible to know if, or when, the next pandemic will come, but it is sure that, to be ready, a joint effort is necessary. [242]

Moreover, "if a strong, safe and equal society depends on healthy individuals, the necessity of a European Health Union (EHU) is ever more necessary".[243]

So, while in the past public health was limited to the mere scope of granting the normal rhythm of trade among national economies, in the years the concept has undergone what can be defined a sort of evolutional path.

Focusing on the role the European Union has vested while dealing with public health, it is possible to notice how, despite moving its first steps, the EU is trying to expand its horizons by creating the so-called European Health Union, able to coordinate and integrate public health policies of the single member states, with the final aim of bettering the lives of European citizens.

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[241] Kickbusch, I., de Ruijter, A., 2021. How a European health union can strengthen global health. *The Lancet Regional Health- Europe 1* (2021). Available at: https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(21)00002-8/fulltext

[242]European Health Forum Gastein, 2021.The case for a European Health Union. Available at: https://www.youtube.com/watch?v=WXaqDxW_448

[243] European Commission, 2021. European https://www.youtube.com/watch?v=f4MSxwEIWJg

In embarking in such an ambitious path, the EU has distinguished itself internationally, and to date it is possible to affirm that EU is vesting a leading role, being followed as a model role also by non-EU nations and other international institutions. The first steps have been moved, but efforts from all the active stakeholders operating within the European policy making agenda are needed, efforts that must be backed by the belief that coordination and integration, in such an interconnected society, are the essential engines necessary to create new opportunities to better our lives.

3.6 Public health and Agenda 2030: an urban context approach to Sustainable Development Goals number 3 and 11

This second part will propose the analysis of two of the seventeen sustainable Development Goals (SDGs) of the UN Agenda 2030. Established in order to reach the ambitious goal of a more equitable and just world for everyone by 2030, the focus of this section will be placed on the SDGs number 3 and number 11.

Goal number 3, named “Good health and well-being”, is strongly related to the topic of public health. Despite the focus primarily on clinical health of the SGD number 3, the chapter propose a social and political approach. Without institutional cooperation, provided also by SDG number 17, no one of the 17 goals can be achieved.

Being the places where, by 2030, more than one third of the human population will settle, cities represent an essential point of interest for the development and implementation of policies aimed at protecting public health. Called “sustainable cities and communities”, SDG number 11 has among its major objectives that of creating more equitable cities and human settlements, where everyone can benefit of a safe and secure life.

In a holistic view, where the strong interconnections between goal number 3 and goal number 11 have to be highlighted in a systemic perspective, it is also interesting to deal with the so-called Health in All Policies approach (HiAP), which proposes a systemic view of different kinds of policies, that, despite their heterogeneous focus, are united by

the need to provide specific public health policies in order to protect all the aspects concerning the social, economic, political and environmental life.

From an international relations perspective, it is noteworthy that the UN Agenda 2030, which had been endorsed in 2015 by all 193 UN Member States, represents a significant advancement in the pursuit of the ambitious objective of achieving a more equitable and sustainable global community by 2030, with the fundamental principle of leaving no one behind. The concept of equity and equality is strongly protected and developed by several nations, many of which enshrine this right, and collective desire, in their fundamental charters, so, in their Constitutions.

One of the most considered and well-known Constitution from the point of view of the protection of public health and social equality is the Italian one, which, despite its not new conception, having been drafted in 1947, is widely regarded as a bulwark for civil and social rights, underscoring the Italian Republic commitment in safeguarding public health and in promoting social justice. The Italian Constitution, in its article three, asserts that the responsibility of the Republic lies in the elimination of impediments of economic and social origin. These impediments, by limiting the freedom and equality of citizens, impede the comprehensive development of the human being, and, furthermore, limit the effective involvement of all citizens, seen as active workers, in the political, economic and social structure of the nation.

This concept, which is among the fundamental principles of the Italian Constitution, demonstrates that public health is not merely to be understood as health in its narrowest sense, that is from a pure medical point of view. Rather, public health implies the achievement of the highest possible standard of living, thus also encompassing aspects of an economic, political and social nature,[244] without which a full development of the human being will not be able to take place.

The main objective of the UN Agenda 2030 and of its 17 Sustainable Development Goals (SDGs) is, so, to increase well-being and protect public health, maintaining a central focus

[244] Moallemi, Enayat A., et al. «Local Agenda 2030 for Sustainable Development». *The Lancet Planetary Health*, vol. 3, fasc. 6, June 2019, pp.240–41. Avainable at: https://doi.org/10.1016/S2542-5196(19)30087-7, p.1

on the implementation of policies aiming at granting the full development of the citizens, both as individuals and as part of a community, while enhancing economic progress in a sustainable way. Sustainable development, in fact, in one of the main key words of the UN Agenda 2030.

3.7 From a theoretical approach to public health policies implementation

The concept of sustainable development was initially introduced by the Brundtland Report of 1987, which was produced by the World Commission on Environment and Development (WCED). The report defined sustainable development as

> *"[T]hat development which meets the needs of the present generation without compromising the satisfaction of the needs of future generations".*

This definition can be interpreted as a form of intergenerational pact, whereby the present generation agrees to limit its influence in favour of the future ones, through the protection of public health fundamentals while granting economic and social progresses for the present and the future populations.

The intricacy of the subjects addressed frequently results in non-linear pathways, which have frequently given rise to novel developmental pathways, terminology and conceptual frameworks that, while enhancing, concomitantly render the attainment of the objectives of the UN 2030 Agenda more arduous from a public health standpoint. So, the systematic approach deemed necessary in order to reach the ambitious goals proposed and advanced by the UN Agenda 2030 have often led to the creation of new concepts, and one of the main ones is that of One Health (OH). As seen before in relation to the European Health Union (EHU) project, this approach advances the idea of an integration of different health, that are the human, animal, plant and ecosystem ones, due to the interdependence that characterizes those different systems. Furthermore, the protection of those systems is also

seen as an intergenerational pact, in a future oriented vision that aims at protecting future generations.[245]

While observing the interconnections evidenced among these different contexts by the concept of One Health, it is interesting to take as an example the relation between the increases in human quality life, that took place since the second half of the nineteenth century with the Industrial Revolution, and the negative impacts that those advancements represented, and that still today represent, for the environment. Progresses in human health have many times been achieved through the exploitation of natural resources and without any consideration for the impact they had on the environment, so, damaging our ecosystem. Nowadays we are paying the consequences of those environment-threatening policies, with climate changes and biodiversity loss, flooding, and environmental degradation negatively impacting on the quality of our lives and causing deterioration of human health.[246] This phenomenon can be evaluated as a vicious circle, where in the short term, the pursuit of economic prosperity and advancement, without any consideration for the social and environmental ramifications of such development, is not immediately reflected in societal outcomes. The deleterious effects of this phenomenon manifest, instead, over time, leading to the necessity of substantial responsive measures in the public health sector, which incur considerable social and economic costs.

Accordingly with this view and to this increasing awareness, preventive measures are ever more considered as necessary, in order to have a preventative idea and provision of the consequences and of both the positive and negative impacts that economic activities, political initiative and public investments could have on the society, the environment and the economy. Despite this consciousness, recent research provided by the World Health Organization (WHO) report that countries invest more in reactive rather than preventive policies. This represent a risk since taking actions in a reactive way means that eventual damages and underproductive effects and action had been already implemented.

[245] Queenan, K., et al. «Roadmap to a One Health Agenda 2030.» *CABI Reviews*, May 2017, pp. 1–17. https://doi.org/10.1079/PAVSNNR201712014, p.1
[246] Ibidem, p.2

Responding to this necessity for an active shift in public health administration and conceptualization, the UN Agenda 2030 represents a huge step towards this ambitious, systemic and complex goal. Promoting the prosecution, the integration and the coordination in, and of, different sectors concerning human and ecosystem protection, it represents a first important and fundamental step in the long path that our society must undergo in order to protect and enhance public health in its wider sense. Highlighting the importance of the inextricable linkages, which characterise the various aspects of public health, it is interesting to point out how this new concept of One Health can represent an overall total in the perspective of an integrated and accessible system. The 17 SDGs, with their 169 targets, deal with the social, environmental and economic pillars affecting sustainable development,[247] highlighting the complexity characterising public health policies.

In the context proposed by the UN Agenda 2030 health is considered as an essential factor for the reach of the ambitious goal of sustainable development in all the 17 SDGs and, consequently, in all their different purposes and sectors of activity. Synergies, in the systemic view proposed by the UN Agenda 2030, seen as the common background were each of the 17 SDGs, with their 169 targets, have not to be considered as a single component, but as an unique and essential power granting the success of policies implemented by national governments and supranational organization. As claimed by author Waage

> *"[…] sustainable development is more than the sum of its parts and is an outcome of positive synergies between multiple elements and may be undermined by negative trade-offs between them".*

Moreover, several are the policies that, for example, aiming principally to the protection of the environment, are able at the same time to grant better living conditions to the citizenry, in a systemic view where gains in one sector are wins also in other contexts. For example, the presence of green areas in the urban context, such as parks, squares and gardens, provide positive aspects both for the citizens populating urban areas and the

[247] Ibidem, p.4

environment. These "Green space policies" represent one of the most well-known, and appreciated by the urban population, urban and public health policies. Physical and mental health are positively affected by the presence of green areas, and, at the same time, climate change effects can be mitigated by the presence of such areas. The reduction of carbon gas emissions and greenhouse gasses (GHGs) and the absorption of flooding water are example of positive effects affecting public health.[248] Furthermore, data evidence that the presence of such green areas in urban context permit an exponential increase in the standard of living of the population. In those green oasis citizens can spend their time doing physical activities, taking part to projects for the community and spend their free time in the nature.

In conclusion, the increasing awareness of the necessity for a more integrated system and for a preventive approach, through cooperation among local, international, national and supranational institutions, agencies and organizations, make it ever clearer that human beings are but one piece in the ecosystem puzzle, where public health represents a common background.[249]

3.8 Public health: a multilateral discipline

In 2012, during her WHO Director General speech, Dr Margaret Chan claimed that:

> *"[U]niversal coverage is the single most powerful concept that public health has to offer. It is our ticket to greater efficiency and better quality. It is our saviour from the crushing weight of chronic noncommunicable diseases (NCDs) that now engulf the globe".*[250]

SDG number 3 includes universal health coverage (UHC) as one of its targets.

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[248] Ibidem, p.7

[249] Queenan, K., et al. «Roadmap to a One Health Agenda 2030.» *CABI Reviews*, May 2017, pp. 1–17. https://doi.org/10.1079/PAVSNNR201712014, p.12

[250] Schmidt, Harald, et al. «Public Health, Universal Health Coverage, and Sustainable Development Goals: Can They Coexist?» *The Lancet*, vol. 386, fasc. 9996, August 2015, pp. 928–30. https://doi.org/10.1016/S0140-6736(15)60244-6, p.928

Schmidt and colleagues evidence, in their research, the strong correlation among Universal Health Coverage (UHC), public health and UN Agenda 2030's 17 SDGs, with particular attention given to SDG number 3. In their work, the authors highlight the risk represented by dedicating increasing resources and attention to the clinical aspect of public health. Viewing public health merely from a scientific and clinical perspective, posing at the centre of public health exclusively sanitary policies, would undermine and provide less resources, times and opportunities to all the other aspect concerning public health, such as prevention, promotion and the management of the social determinants of health (SDH).[251]

Clinical interventions tend to be benefited majorly by population of high-income countries and, within those countries, by wealthier social strata, thus increasing inequalities both among the same population and also among different countries. At the same time, clinical interventions are limited to those who are benefiting them, while wider public health policies such as those relating to the environmental protection and food programmes usually are less considered than the clinical one, despite those general policies would positively affect all the population in a more general and comprehensive way. While developing and implementing those type of public health policies it is fundamental to preventatively evaluate their impact on the general well-being of the population, considering also the general audience that will benefit from the investments in those initiatives.

Furthermore, abandoning the classic "siloed structure" where each department administrate its own policy, while not minding the issues topic and the interests of other institutions, would create positive result while implementing public health policies. The adoption of a Health in All Policies approach (HiAP) will grant positive collaboration and synergies, increasing the reaching and the positive effects taken by a single policy. For example, education and environmental aspect of public health could be integrated[252] through the development of projects within the educational programmes in schools in order to make students, so, the future generations, more aware and more conscious about

[251]Ibidem, p.929.
[252] Ibidem, p.930

the importance of their daily actions regarding the environment and, consequently, regarding public health.

Furthermore, adopting a narrower perspective and being aware that cities are and will increasingly be the places where human being inhabit and work, it is important to understand the importance of their organization in a way that respects public health and well-being. So, as mentioned before, two are the Sustainable Development Goals that focus their essence on cities and communities and on well-being and public health. Sustainable Development Goal number 11 provides for the creation of inclusive, safe, resilient and sustainable cities, and, in order to reach this goal, health and well-being, as provided by SDG number 3, are fundamental preconditions. While projecting, developing and managing cities giving particular attention to the concept of public health, aiming at protecting and increasing the quality of the life of the citizens, an essential and new approach that have been developed in the last years is the before mentioned Health in All Policies (HiAP) approach.[253]

3.9 Public health policies implementation instruments

A clear statement that evidences the necessity for a systemic effort able to better take advantage of the synergies deriving from the coordination in various sectors is the one of Elisa Milani, coordinator project of the sanitary area of "The European House – Ambrosetti". Doctor Milani in 2023 stated that the concomitance of geopolitical and social crises, economic and financial difficulties, and environmental degradation had, combined all together, a significant negative impact on the mental health of the European citizens. The polycrisis situation that took place in 2023 deriving from the concomitance of several different threats and challenges made it ever more necessary

> "*[…] [T]he utilisation of data-driven instruments by policymakers, [that will signify] an opportunity to ascertain the most pressing domains, thereby enabling*

[253] Ramirez-Rubio, Oriana, et al. «Urban Health: An Example of a "Health in All Policies" Approach in the Context of SDGs Implementation». *Globalization and Health*, vol. 15, fasc. 1, December 2019. https://doi.org/10.1186/s12992-019-0529-z, p.1

intervention through a multidisciplinary and collaborative approach aimed at fostering a more equitable and resilient society".[254]

Moreover, the CEO of Angelini Pharma, Doctor Jacopo Andreose, claimed that:

"The EU mental health strategy, recently launched by the European Commission, focuses on prevention, access to treatment and reintegration into society. It is an encouraging example of the growing awareness by national governments, academia, the health industry and other stakeholders of the need for more comprehensive support to address the unprecedented increase in mental health problems in Europe. […] [W]e are optimistic about fostering the exchange of ideas and the evolution of perspectives, along with the dissemination of optimal practices, in the context of this all-encompassing depiction of mental health in Europe".[255]

Fundamental in order to evaluate HiAP implementations are evaluation tools and scientific evidence such as Health Impact Assessments (HIAs), which are definable as instrument to evaluate "city-level quantitative burden of disease, health economic assessments, and citizen and other stakeholders' involvement to inform the integration of health recommendations in urban policies".[256]

"An example is the Health Economic Assessment Tool (HEAT), which can be used when planning new cycling and walking infrastructure to assess the health benefits by estimating the value of reduced mortality".[257]

Relatively to the urban context, to implement sustainable projects such as those devoted to increase sustainable mobility, equal access to medical care, green areas and reducing

[254] https://www.sanita33.it/indagini/1929/salute-mentale-italia-terzultima-in-ue-per-i-fondi-il-rapporto-headway.html
[255] Ibidem
[256] Ibidem
[257] World Health Organization. Health as the Pulse of the New Urban Agenda: United Nations Conference on Housing and Sustainable Urban Development, Quito, October 2016. *World Health Organization*, 2016. WHO IRIS, https://iris.who.int/handle/10665/250367, p.30

emissions are urban projects that, starting from a vision related to the management of the cities, aim at increasing and protecting public health.

The way in which public policies have been developed in the last decades have profoundly changed due to the increased role played by new public health related issues, such as climate change, demographic transition and epidemiological diffusion. Being the places where over the 50% of the entire human population live, cities have proved to be the best social context where try and, if effective, develop and implement policies linking public health, social determinants and environment in an intersectoral vision.[258]

3.10 Cities and public health: implementation and monitoring systems

Due to the strong interrelation among public health and urban planning, two pioneering programmes have been created in order to increase the life quality of the citizens. The first is the 2015 UN Agenda 2030, that, with its 17 SDGs and 169 targets, aims at a general increase of life quality, while at the same time increasing equity and equality among the society, giving particular attention the less wealthy social classes.

The second fundamental project is the 2016 UN New Urban Agenda at Habitat III, where for the first time health have been recognised as a multifaceted issue vesting a central role in Urban Planning.

Focusing on the UN Agenda 2030 will permit to better understand the global, intersectoral and cross cutting role that public health play in our society, posing particular attention to the urban context.

The following table evidences the strong, both direct and indirect, interrelations among public health and SDG number 3 and number 11. It is interesting to see how those two goals of the UN Agenda 2030 represent a sort of evolution undergone by the relation between urban planning and public health that had been recognised already in the fourteenth century Venice, which, plague affected, was trying to develop policies and

[258] Ibidem, p.1

regulation aiming at limiting the spread of the contagion not only among its population, but also to the other port cities active in trade.

Focusing on each of the two selected SDG, the number 3 vest a wider role, proposing intervention relating to classical public health measures such as health care systems, emergency preparedness, health workforce, medical and scientific research, vaccines availability, health protection and prevention. At the same time, SDG 11, dedicated to the development of the urban context, pose the lens over more general issues, like environment, pollution, housing, green spaces, sustainable mobility and urban planning.[259]

Of course, all the other 15 remaining SDG are strongly related to public health but focusing on the relation between human settlements and public health protection, SDG number 3 and number 11 represent for sure a kind of core, due to the particular attention they dedicate to this concept and topic. Those remaining SDG pose particular attention to what are called as the Social Determinants of Health (SDHs), definable as all the socio-economic dimensions that influence the quality of life of the citizens.[260]

[259] Ibidem, p.3
[260] Ibidem, p.4

Fig. 1 Conceptual Framework: Urban Health related SDGs within a HiAP approach

Source: Ramirez-Rubio, Oriana, et al. «Urban Health: An Example of a "Health in All Policies" Approach in the Context of SDGs Implementation». *Globalization and Health*, vol. 15, fasc. 1, December 2019. https://doi.org/10.1186/s12992-019-0529-z, p.4

What is important to note is not only the advantages provided by public health interventions in urban planning in a perspective of enhancing life quality, but, furthermore, also the social costs savings that such implementations represent for the collectivity. An ill individual not only is unproductive but represents also a burden for the welfare of the state.[261]

[261] Ibidem, p.5

Having observed the theoretical relation between public health and urban planning, it is fundamental to understand how those policies can be effectively implemented in our society.

The World Health Organization (WHO) defines the Health in All Policies approach (HiAP) as

> *"[A]n approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts in order to improve population health and health equity"*.

The HiAP approach strategy provides a strong and effective "horizontal governance" approach to complex health problems that involves from the local to the highest levels of government, political and executive leadership leading to effective priority setting, innovation in policy making and implementation of sustainable solutions. The HiAP approach, accordingly to the definition provided by the World Health Organisation (WHO) is an approach that take as main objective that of protecting and enhancing public health while developing and implementing public policies in all the sectors of interest of the society. In order to be effective, such an approach needs bottom-up and top-down supports, with strong efforts coming in particular from the population, the political, and the legal context.[262]

HiAP approach poses attention to the importance of intersectoral work, the cross-cutting aspect of health equity, and the strong interrelation among all the active stakeholders in public policies creation and implementation, such as citizens, policymakers, businesses and international organisations. [263]

In relation to the implementation of Agenda 2030 goals, its 17 SGDs and 169 targets represent for sure a favourable context for the development of the HiAP approach. Furthermore, "HiAP gained momentum in the last decade through the intensive debate on action for social determinants of health […]". Moreover, a focal aspect of this type of approach is the long term needed in order to implement effective policies that will produce

[262] Ibidem, p.5
[263] Ibidem, p.16

results. Often policies are characterized by a short-term period, since offices proposing those policies mind the re-election possibility in the successive political cycle. Abandoning this utilitaristic perspective and adopting a vision really concerned about the society interests, will request for longer time frameworks. Longer time framework will permit a full development and implementation of public health policies in a Health in All Policies approach.[264]

While implementing those policies, their monitoring is fundamental in order to evaluate the gained progresses, and one of the principal instruments used for this scope are Health Impact assessment instruments (HIAs). The World Health Organisation defines HIAs as:

> *"a mean of assessing the health impacts of policies, plans and projects in diverse economic sectors using quantitative, qualitative and participatory techniques". Some of the most famous HIAs are "the Health Economic As assessment Tool (HEAT) for walking and cycling, the Integrated Transport and Health Impact Modeling (ITHIM), the Transportation, Air pollution and Physical Activities (TAPAS), the Urban and Transport Planning Health Impact Assessment (UTOPHIA*)".[265]

While political and legal favourable contexts and health impact assessment instruments are usually widely available, the other fundamental factors, while implementing and evaluating health policies, that is, quality and availability of information, usually represent a bottleneck.[266]

"Because Health Impact Assessments engage multiple actors across diverse sectors, they can illustrate clearly how Health in All Policies can be an attractive and effective framework for systemic thinking about health. A key asset of a full-chain HIA process is precisely the involvement of citizens and members of different communities whose voices are not usually heard, and this is also a fundamental requirement to sustainable development and the 2030 Agenda".

[264] Ibidem, p.10
[265] Ibidem, p.11
[266] Ibidem, p.16

The Agenda 2030 with its 17 SDGs offers a great opportunity for the development of a more integrated context where human, animal, plant and ecosystem health could be considered in a more integrated way. This vision can be defined as One Health approach (OH), which main objective will be that of de-sectorized the implementation and the projects designed for each single scope, while adopting a more integrated and systemic view.[267]

UN Agenda 2030, proposing for an interconnected set of Sustainable Development Goals all integrated among themselves, offers an innovative view, making all the stakeholders, from the single citizen to the policymakers and the institutions they represent, more aware about the importance of adopting an integrated and future oriented vision. From the twentieth century it started to be clear that it was not anymore possible to achieve a complete and full-developed public health continuing to consider health as a fragmented framework, where humans, animals and the environment where disciplined in a individually and in a siloed way, where different in scope ministries and institutions do not communicate and collaborate, if not in a minimum way.[268]

The strong interdependence between human and environmental health has started to be ever clearer in the last century. Gains in human health often happen to the detriment of the health of the environment. Food security, implying increase in food production, is one of the main generating sectors of climate change, due to the high soil and natural resources exploitation requested by food production activities. At the same time, the use of pesticides and antibiotics to ensure food safety negatively impact on the health of animals, plants and the environment, which in turn, as in a vicious circle, negatively impact on people's health.[269]

Another aspect that is strongly politically driven is the preference of responsive action instead of preventive policies. Due to the high visibility of responsive and curative policies, that directly impact and resolve the problem, and also the usual short-term required to be effective, at a political level responsive measures are preferred compared

[267] Queenan, K., et al. «Roadmap to a One Health Agenda 2030.» *CABI Reviews*, May 2017, pp. 1–17. https://doi.org/10.1079/PAVSNNR201712014, p.1
[268] Ibidem, p.1
[269] Ibidem, p.2

to the preventive ones. Preventive actions require time-spending processes, usually difficult to be implemented, mainly for the huge number of information management and education activities that prevention requires.[270]

What our society is starting to consider essential in order to implement effective public health policies is a shift in our vision and in our thinking.

> *"A paradigm shift is needed towards a fully integrated approach to health; a system […] approach with a focus on restoring resilience of biological systems at all scales, including humans, animals and plants, an approach known as One Health (OH), derived from the One World One Health concept, which emerged in the first decade of the twenty-first century".*[271]

UN Agenda 2030, as reported before, represents a huge opportunity to implement this paradigm shift. Despite health is considered within Agenda 2030 as a precondition, an indicator and also as an outcome of sustainable development regarding all the 17 SDGs, in this chapter will be maintained the focus on SDG number 3 and number 11.[272]

In particular, SDG 11, focused on urban development, is strongly related to SDG 3, due to the high impact that urban planning has about public health.

> *"Urban development without the provision of natural green space, exacerbates air pollution, reduces opportunities to exercise and produces subtle negative effects on physical and mental health".*[273]

[270] Ibidem, p.2
[271] Ibidem, p.2
[272] Queenan, K., et al. «Roadmap to a One Health Agenda 2030.» *CABI Reviews*, maggio 2017, pp. 1–17, https://doi.org/10.1079/PAVSNNR201712014, p.5
[273] Ibidem, p.7

Source: Queenan, K., et al. «Roadmap to a One Health Agenda 2030.» *CABI Reviews*, May 2017, pp. 1–17, https://doi.org/10.1079/PAVSNNR201712014, p.5

Usually policy making consider five elements, that are economic, technical, legal, operational and scheduling. Nowadays, with the increasing consciousness about the role and the importance of public health, and also due to the new and complex problems affecting our society, such as emerging diseases and climate change, representing new challenges that have to be faced, request the implementation of new policies and responses.[274]

Those new emerging problems are related to the protection of the environment, and, in conclusion, One Health (OH) principle promotes two main concepts. The first is that human health is "*is directly related to the health of the system*". Second, that while trying to increase human development, our society must give attention to "*address, mitigate and where necessary reverse […] impacts to restore ecological processes and function".*[275]

[274] Ibidem, p.10
[275] Ibidem, p.11

Furthermore, due to the increasing urbanisation of the last centuries, urban planning has become fundamental in order to improve and protect public health. Cities have the capacity of shaping lifestyles, promoting wellbeing, increase sustainability and increase equity among the population. Abandoning the siloed view that usually characterises public health projects, while adopting a more systemic vision, able to exploit synergies and of implementing Health in All Policies approach, would represent a step towards an increased public health protection.

Sustainability, green spaces, housing and the presence of essential services must be posed as priorities while planning new urban areas. All those aspects would reduce pollution while enforcing correct lifestyles. As reported before, the Social Determinants of Health (SDH) are fundamental in public health interventions. As an example, it is possible to mention education, that must be seen as an investment for our society, due to the fact that education represent both a component of health and a key driver in the path for gaining health equity. First, it is possible to evidence how education shapes individuals' behaviour, and, as research demonstrate, individuals with higher education usually benefit from their personal choices. Second, differences in educational levels usually increase health disparities. Public policies dedicated to the reduction of educational gaps within the same community, in this case definable as public health policies, have direct positive impacts in health levels. This is explained by the direct correlation between higher educational levels and higher income, better working conditions, and reduced engagement in risky behaviours.

> *"Education is a process and a product. […] Knowledge, in fact, is not apprehended only in school, but is represent an example of lifelong learning. Schools, but first of all families and communities, are the teachers of […] lives."*[276]

Research provide that health is a prerequisite for education, because, in absence of health, education cannot be achieved. Being an essential aspect for human survival, without health education is not possible. Furthermore, health can also be learnt in school, so,

[276] Hahn, Robert A., e Benedict I. Truman. «Education Improves Public Health and Promotes Health Equity». *International Journal of Health Services*, vol. 45, fasc. 4, ottobre 2015, pp. 657–78, https://doi.org/10.1177/0020731415585986, p.658

effective programmes contributing to healthy behaviours diffusion must be promoted by the governments through public interventions. Another aspect is physical education, that, learnt in school, both directly and indirectly affects the physical and the psychological health and development of a person.[277]

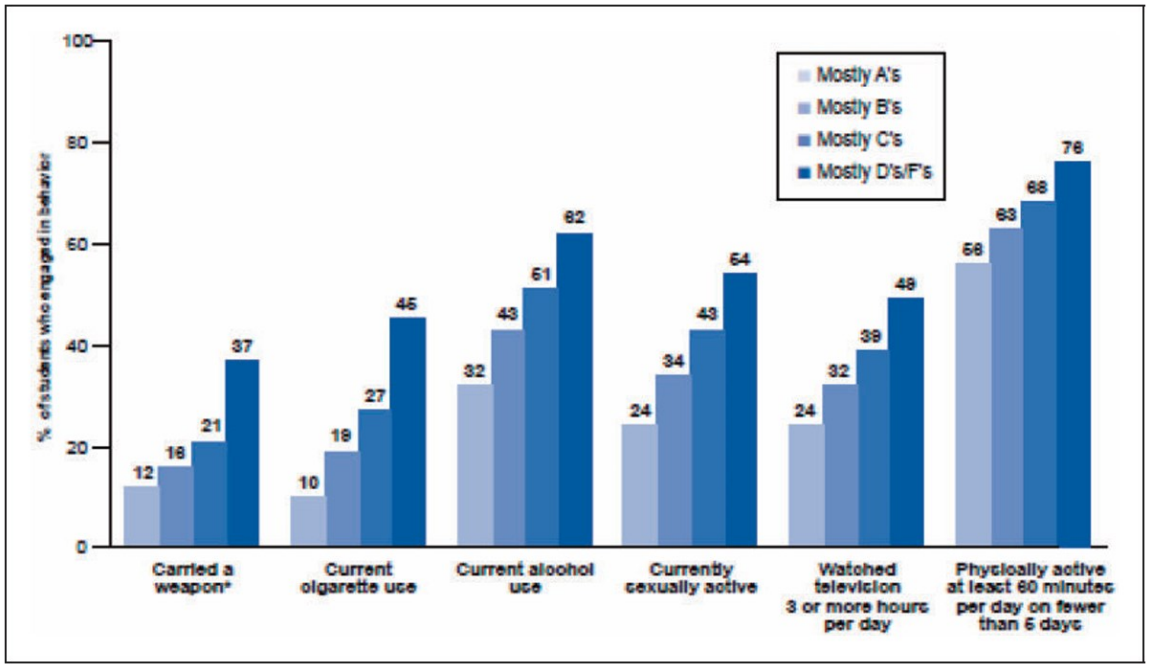
> "*Education should also be recognized as an essential requirement for the disruption of the cycle of poverty and inequities in health. The public health community should expand research to better understand the causal relationships between education and health, and thereby identify evidence-based educational policies that have great potential to improve public health*".[278]

So, education can be evaluated as an integral part of being healthy. The promotion of health is also achieved through individual decisions, that can be taken in a correct way only if based on a good level of knowledge and, above all, in a fair and equitable conditions. Limitations of an economic, social, cultural and environmental tone represents limits to the ability of an individual to take free, safe and healthy decisions.[279]

Of course, education can be evaluated in multiple ways, both as a cause and, at the same time, as an element of health. A clear example is physical health, since fitness represents time both a consequence and a prerequisite for health.

The table below represents the association between risky behaviours, such as weapon use, smoking and alcoholic drink and the educational level of the surveyed.

[277] Ibidem, p.658
[278] Ibidem, p.659
[279] Ibidem, p.660



Source: Hahn, Robert A., e Benedict I. Truman. «Education Improves Public Health and Promotes Health Equity». *International Journal of Health Services*, vol. 45, fasc. 4, October 2015, pp. 657–78, https://doi.org/10.1177/0020731415585986, p.662.

Furthermore, higher educational levels are accompanied by better working carrier opportunities, that are usually associated to higher wages. Higher wages permit better lifestyles, with healthy food, safe environment and healthcare.

A research conducted in the US reports that:

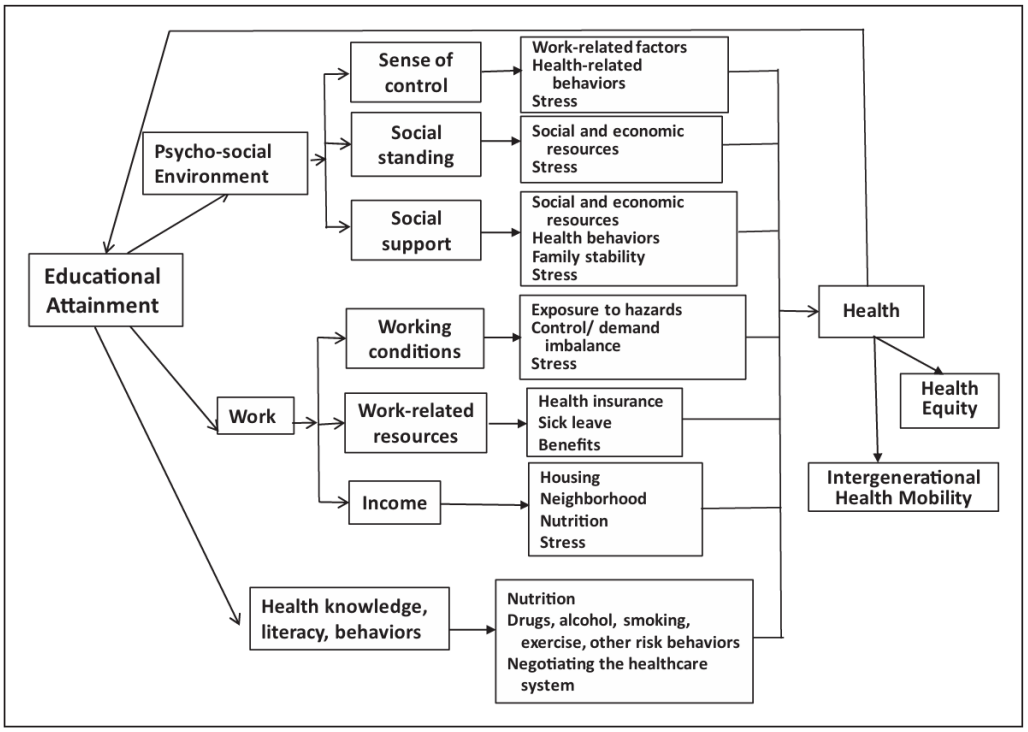
> "*From the perspective of life expectancy, at age 25 in 2005, a man in the United States with less than a high school education could expect to live an additional 44.2 years to age 69.2 years; a man with a graduate degree could expect to live more than 15 years longer. At age 25 years, a woman in the United States with less than a high school education could expect to live to age 74.9 years; a woman with a graduate degree could expect to live more than 11 years longer"*. [280]

This quotation strongly evidences the positive relation between educational level of an individual and the corresponding increase in its life expectancy, underlying necessity of

[280] Ibidem, p.665

evaluating education and educational programmes as fundamental public health measures.

Again, Hahn and colleagues propose a scheme evidencing how the educational level of each person influences its lifestyle and, consequently, its health.



Source: Hahn, Robert A., e Benedict I. Truman. «Education Improves Public Health and Promotes Health Equity». *International Journal of Health Services*, vol. 45, fasc. 4, October 2015, pp. 657–78, https://doi.org/10.1177/0020731415585986.

Due to the importance that health of the individuals represents for public health in a collective perspective, health interventions must be considered as a state priority. In the same vision, being directly linked to the increase in health, education must be prioritized by the governments. This awareness is further proved by the observation that

> "*[E]ducation is a powerful means of breaking the cycle of poverty […] and promoting health equity".*[281]

So, in a wider perspective, focusing on the importance of education within the urban context, policies regulating lifestyles of the citizens, both as individual and as a

[281] Ibidem, p.672

collectivity, can be considered as public health interventions, thanks to the huge impact that a good education entails for the public health.

3.11 Cities and public health: the role of urban planning and health inequities

The ever more changing context in which we live in made it necessary a continuous adaptation of our cities. Our cities need *"[...] to be supported by an integrative and nimble urban and territorial planning that is strategic, participatory and based on human rights principles".*[282]

The need for the integration of public health measures within Urban and Territorial planning (UTP) is ever more aware and necessary. By 2050 provisions show that urban population will double and, if not prepared and well endorsed, our society will be negatively affected by such a drastic increase in urban population.[283]

Furthermore, being not yet fully implemented and organized to host such an increasing number of inhabitants, if well managed, those exponential augmentation in urban inhabitants will represent a great opportunity for our society to adapt our urban context while increasing at the same time human rights and life quality. Effective projects, programmes and policies must be developed and implemented in a public health protection perspective.

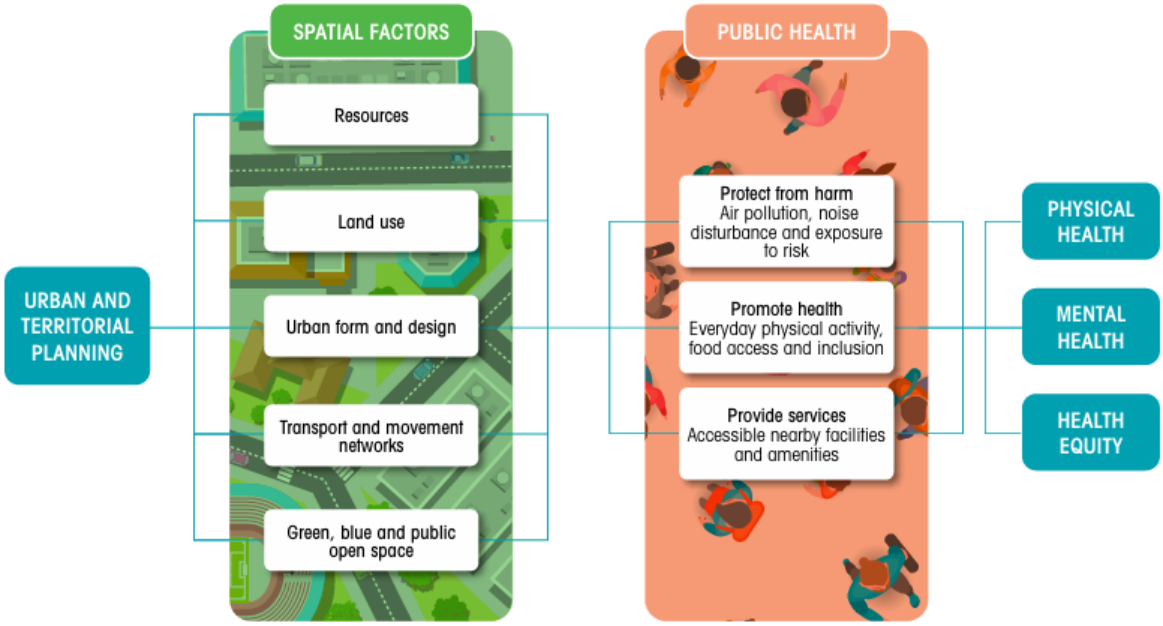
One of the first steps that must be moved is the cooperation among the different stakeholders and population level. Synergies must be recognized, so, abandoning the siloed view that still today is adopted in decision making processes, in order to adopt a more systemic and cooperative view. Fragmentation, uncontrolled urbanization,

[282] Integrating Health in Urban and Territorial Planning: A Sourcebook. 1st ed, *World Health Organization*, 2020, p.9
[283] Urban planning crucial for better public health in cities. *WHO*, May 2020, p.2

unsustainable development and food systems insecurity are some of the several and different aspects that represents the causes and the results of a unhealthy urban context.[284]

The increasing role played by global phenomena, such as climate change, overpopulation and environmental loss have a huge and negative impact over population health and, so, over public health. All those negative aspects are increasing inequalities among the population, making ever more necessary a strong governmental response through public health policies implementation.

Urban and Territorial Planning (UTP) represent for sure a unique and fundamental area of public health policies implementation.



Source: *Integrating Health in Urban and Territorial Planning: A Sourcebook*. 1st ed, World Health Organization, 2020. pag.10

The many interconnections observed by the 17 SDGs of the UN Agenda 2030 have evidenced the necessity for a strong response to the actual huge problematic of inequity in health. Our society presents a lot of disparities, and one of the most associated with public health issue is that of inequality in health.

[284] Integrating Health in Urban and Territorial Planning: A Sourcebook. 1st ed, *World Health Organization*, 2020, p.10

> *"Three features, when combined, turn a mere difference in health into an inequity in health. A difference in health that is systematic, socially produced […] and unfair is an inequity in health. Inequity is unfair because we know how to reduce inequities with available solutions and to not take action is unjust. Furthermore, inequities are avoidable and preventable".*[285]

As reported by the citation above, what represent a risk for our society is that those unfair situations are avoidable and preventable, but despite that, several times, due to the high costs and the implementation difficulties, any type of solution is taken. Solutions to these health inequalities can be promoted through public health policies, which must be characterised by cooperation among the interested population, able to offer practical reviews and on-the-field feedback and observations. These "bottom-up" resources must be mixed and intertwined with government and public institutions actions, so, abandoning a mere "top-down" perspective. Our ever more integrated society need increased collaboration among the different stakeholders within our global society, seeing the voices, the experiences and the situations of every citizen as a fundamental resource in the path undergone in order to increase public health in our cities.

It is necessary to adopt a new approach while evaluating how our cities are planned, governed and developed. For example, the increasing Non-Communicable Diseases (NCDs) diffusion is strongly dependent of the management and planning of urban areas. As analysed in the first chapter, relatively to the fourteenth century Venice during the plague pandemic, waste and infrastructures management, air pollution due to productive activities and access to clean water and food are fundamental aspect in preserving public health and, consequently, citizens well-being. Therefore,

> *"[U]rbanization is driving NCDs epidemics, which in turn can undermine the resilience and sustainability of cities".*

[285] Integrating Health in Urban and Territorial Planning: A Sourcebook. 1st ed, *World Health Organization*, 2020, p.11

Data evidence that NCDs represent already the causes of approximately 70% of annual global death, with unplanned urbanization representing one of the major causes.[286]

Following the "file rouge" proposed in this thesis, so, the development of the concept of public health, it is necessary to note that also some aspects of urbanization have changed over the centuries. For example, nowadays, the presence of green spaces where citizens can spend their free time, doing physical activities or just relaxing, with the awareness of living in an area free form pollution and resilient to climate change threats, represent an essential aspect for our modern society. Furthermore, as a vicious cycle,

> *"[unhealthy] urban environment also provides a captive market for unhealthy foods and beverages, and the propagation of unhealthy behaviours, such as tobacco and gambling addictions […]".*[287]

Health promotion, prevention and better equity are fundamental outcome of Urban and Territorial Planning (UTP) projects implementations. At the same time, health can be considered also as an input.

Health can represent an opportunity for UTP, for example, the adoption of health focus while implementing public policies gives the opportunity to merge different agendas, about climate change, food management and equal rights, limiting the so-called siloed approaches. Furthermore, health policies increase population awareness about the importance of public health policies, increasing in turn the demand for public health policies. Accordingly, posing health and well-being as a common goal will increase the aspirations and the collaborative visions within cities, regions and nations.[288]

The adoption of the before mentioned "health lens" in public health policies, projects and programmes implementation could represent, again, an opportunity to overcome health equity disparities. For example, evaluating health as an input, it is possible to plan more compact places, increasing sustainable mobility and at the same time, increasing people integration in the community. This would permit the creation of more inclusive contexts,

[286] Ibidem, p.15
[287] Ibidem, p.15
[288] Ibidem, p.16

characteristic that would permit the reduction of social exclusion and inequalities. Planning better connected places will represent an opportunity for the creation of more resilient cities, less impacted by climate change and natural disasters, where institutions could play a greater role in bettering citizens wellbeing.[289]

All those aspects represent the bulwarks for the creation of sustainable cities. As observed before, the concept of sustainable cities is strongly linked to that of public health, a bulwark in all of the 17 SDGs and 169 targets of the UN Agenda 2030.

Sustainable Development Goals and environment-health links

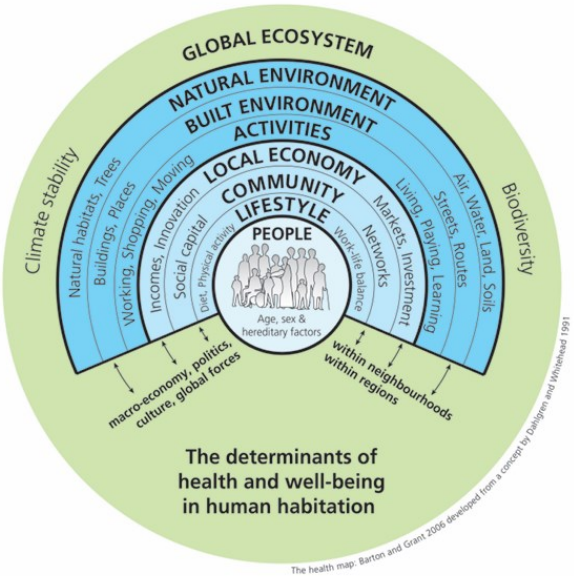
Source: Integrating Health in Urban and Territorial Planning: A Sourcebook. 1st ed, World Health Organization, 2020, p.19, Based on Preventing disease through healthy environments: a global assessment of the burden of disease from environmental risks, p.96 (Prüss Ustün et al, 2016).

[289] Ibidem, p.18

The scheme above reports some of the numerous interconnections between public health initiatives and UN Agenda 2030. Even though SDGs number 3 and number 11 are entirely dedicated to the themes of public health and the development of urban contexts and communities with a view to public health and social equality, the other 15 SDGs, despite the broader and more diverse themes on which they are focused, are also linked to public health in a more or less direct and intense way. A United Nations and World Health Organisation sourcebook reports that:

> *"Urban and territorial planning, especially at national and city-region scale, need to be deployed as a bulwark of health protection and support for population well-being".*[290]

The health determinants within Urban and Territorial Planning policies.



Source: Integrating Health in Urban and Territorial Planning: A Sourcebook. 1st ed, World Health Organization, 2020, p.24

The figure above represents the determinants of health and well-being relevant to Urban and Territorial Planning (UTP) in human habitation, making it clear how a well implemented UTP project could permit to all the stakeholders to control the ever more

[290] Ibidem, p.22

important and numerous changes affecting our society and our environment. Accordingly, as reported in the figure above, health prevention and promotion, and the management of ecological public health, are all matters that can be supported by a good implementation of UTP.[291]

UTP measures are characterized by four phases, that are diagnosis, formulation, implementation and monitoring and evaluation. All these four different phases consider health as an input. For example, during the diagnosis phases, it could be implemented the health assessment of the place, while in the second phase, so, that of the formulations, there could be the testing of health impact. In the third phase, the implementation one, and in the fourth phase, that of monitoring and evaluation, health impact can be observed and analysed, making possible the collection of data and information.[292]

World Health Organization's report "*Health as the pulse of the New Urban Agenda*" recognise nine areas of priorities in public health policies implementation in UTP: transport and mobility, land planning and landscape design, food systems, energy, housing, clean water and waste management, workplaces, slums upgrading and, in the end, greening strategies.[293]

So, bearing in mind the focus of the first chapter, focused on the early modern age Venice and its several attempts for the protection of public health and the management of urban life within the city, it is possible to understand that the awareness about the importance of UTP procedures, and the importance it vest in a public health perspective, started to be clear already in the past.

Bringing attention back to the present day, data evidence that in 20212, more than twelve million people died due to unhealthy urban environment, while in 2016, over seven million people suffered and died due to polluted air in urban cities and peripheries.[294]

It is necessary to rethink our cities giving more attention to the centrality of the citizens. Effective urban planning, infrastructure development and governance must be seen

[291] Ibidem, p.26
[292] Ibidem, p.27
[293] Ibidem, p.36
[294] Urban planning crucial for better public health in cities. *WHO*, May 2020, p.1

through health lenses, aiming at increasing the life quality of the whole population. Decent housing, clean water and air, sustainable mobility, food management are all public health policies necessary to grant a sustainable development within the urban context. In order to do that, collaboration among citizens, policy makers and institutions must be enhanced. Only through cooperation and communication it will be possible to change the siloed approach still today applied, in order to have a more systemic and holistic perspective of health within our cities and lives.[295]

Sustainable Development for all is the final aim of UN Agenda 2030, and synergies have been indicated as one of the principal engines able to permit our society to reach such an ambitious goal within 2030. Considering people as the most important asset in the city, it is clear the high protection they deserve.

> *"Health is essential for fostering good livelihoods, building a productive workforce, creating resilient and vibrant communities, enabling mobility, promoting social interaction, and protecting vulnerable populations".*[296]

The faster and growing rhythms characterising urban areas represent huge challenges that have to be faced in a few years. Within this context,

> *"Health is not only an indicator for monitoring progress, but a fundamental driver of sustainable development".*[297]

Some aspects that necessitate to be considered while implementing and projecting Urban and Territorial Planning (UTP) are, for example, that public health policies are able to reduce Non-Communicable Diseases (NCDs) infections while enhancing wellbeing. Considering heart disease, stroke, cancer and respiratory diseases as NCDs, it is clear the enormous costs they represent for the society as a whole, and for the citizens considered as individuals. In a collective perspective, those diseases represent an increase in health care costs and, at the same time, a decrease in productivity.

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[295] World Health Organization. Health as the Pulse of the New Urban Agenda: United Nations Conference on Housing and Sustainable Urban Development, Quito, October 2016. *World Health Organization*, 2016. *WHO IRIS*, https://iris.who.int/handle/10665/250367, p. IV
[296] Ibidem, p.1
[297] Ibidem, p.1

Several of the main causes of these NCDs can be regulated by public health interventions. For example,

> *"[...] tobacco use, alcohol abuse, physical inactivity, poor diet, exposure to air pollution and chronic stress [...] are directly influenced by urban design and planning policies that are far beyond the control of individuals"*[298].

At the same time, these are issues that can be regulated by policymakers through governmental and institutional interventions. Taxes on products with a high percentage of sugar, together with limitation and restriction on advertisement of products such as tobacco and alcohol, are some of the most common examples of state activity in public health regulation.

Another positive aspect of UTP under a health lens is the increase protection of climate change and the related impacts. Data shows that a gain in life expectancy between two and twenty-two months can be achieved through the implementation of policies about reducing air pollution.[299] Moreover, the creation of green spaces within the urban context would be able to deeply reduce the risk of heat island, while, at the same time, could increase the responsive ability of cities to extreme weather events caused by climate change. Strategic planting of trees in urban areas can cool the air by 2 °C to 8 °C, reducing the urban "heat island" impacts.[300]

In addition, the presence of green areas is positively correlated with improvements in wellbeing and in mental and physical health. Form a social perspective, again, those areas represent an opportunity to increase social cohesion, in particular among the most excluded citizens such as older people, disabled and poor.

> *"Such strategies have been recognized as central to sustainable development: SDG 11.7 calls for provision, by 2030, of universal access to safe, inclusive and*

[298] Ibidem, p.4
[299] Ibidem, p.5
[300] Ibidem, p.18

accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities".[301]

In order to be effective, those public health policies implementation need a continuous assessment in order to evaluate and appreciate the effective results that such investments in health are able to reveal, in particular for the urban population. Coordination and partnership are necessary to develop responses to health risks and opportunities beyond jurisdictions areas. Investments in data collection and urban research are, again, fundamental in order to understand the context in which policies are developed and implemented and in order to evaluate their impact in the context they are applied.[302]

Knowledge sharing and intersectoral cooperations are at the core of health initiatives. While evaluating the costs of such huge projects, it must be considered also the hidden costs of inaction. Inertia entails a set of invisible costs that will present the cost in the future. Being highly expensive, usually public health policies are avoided or, at least, programmed in a short-term view. This depends on the fact that policy makers have power only during their mandate, when they are in office, while effect of such policies come in the long run.

Posing the collective interest over the personalistic ones of the policymakers is necessary in order to protect the collectivity though effective public health policies implementation. While implementing such policies, those actors active in the health and sanitary sectors can act as mediators between population interests and policy-makers ones, increasing and spreading the consciousness about the importance of public health within politics.

[301] Ibidem, p.13
[302] Ibidem, p.22

CONCLUSIONS

I would like to dedicate this last part of my master thesis to the conclusions, highlighting the evolutional path undergone by the concept of public health under both an historical and international relation lenses, in order to prove the multi-sides and systemic approach that characterise the public health discipline.

The development path proposed in this thesis evidences how public health have developed from being a mere administrative activity, seen by the governing institutions and elites as a concept dealing with public order and health of the community, that must be regulated and supervised in order to grant the normal flows of trade and commerce. In the past the main objective of such a delicate economic and social aspect was the mere protection of the economic power of the cities, being still far the idea, or better, the consciousness, of the centrality of the citizens and the community that live within the urban areas.

To reach the awareness that public health represents both a social, political, and economic matter, centuries had to pass. In the early modern age, a sort of pioneering role had been played by Venice, at the time capital of the Serenissima Republic, which understood that "The lifeblood of commerce is health". Such wisdom and foresight made it clear for the Venetian administration that public health measures and policies could not be directed exclusively to the commercial activities and trade, but that people, or better in this case, citizens, must be protected. In order to do that, the numerous administrations established by Venice, together with the implementation of public health measures, both of medical and administrative order, helped the city to proficiently face the several threats posed to the public health while responding to the plague epidemics that pervaded the city in the epoch.

Indirectly, having been proved the efficacy and efficiency of these new measures implemented by the Venetian administration, representing real novelties for the time, this way of administrating public health have widened over the Venetian borders, starting to be adopted also by other cities and port cites.

Already in that time, sharing and management of information, with the above mentioned "Terminazioni", together with an increased cooperation and coordination among port cities started to be understood as the right way in order to increase the efficacy of the public health system facing disease spread, threat that would not have respected political and administrative borders.

Over the centuries, public health vested an increased role, widening its sphere of interest and starting being considered as a human right, representing both an individual and a collective right. Furthermore, international cooperation and coordination revealed essential in the implementation of public health policies within an ever more international background. An evidence is offered by the International Sanitary Conference of Paris of 1851, born as a result of a succession of cholera epidemics during the nineteenth century, during which governments realised the need for greater collaboration in order to create systematic and common protocols that would have been of value beyond individual national borders. Stopping these common invisible enemies could not be limited by jurisdictional boundaries.[303]

Following this increasing awareness, the social, political and international relations agendas started consequently to increase the attention posed on public health, for example including public health aspects in national Constitutions and in institutions and international organisations fundamental charters. The multifaced aspect of public health made it ever more clear how this concept and discipline represent a high complexity, requiring a systemic and future oriented vision able to comprehend all the several aspects and facets entailed.

Nowadays, while dealing with public health, recent challenges that have revealed fundamental, due to the deep influences they have of citizens wellbeing and public order are climate changes and food security, interdependent concepts in turn.

The recent challenge posed by the Covid-19 pandemic that our society have faced profoundly modified daily routines and activities of citizens, institutions, governments

[303] Delogu. G., 2022. Inventare la sanità pubblica in età moderna: Venezia e l'alto Adriatico. *Edizioni Ibis*, p.91

and commercial and financial institutions, in particular within the urban context, being these the most densely populated areas.

These aspect traced a sort of continuity line with the past, when port cities, being the most populated areas, represented a sort of laboratory where public health measures have been developed and public health policies have been implemented.

Despite the continuity, as reported before, deep changes have occurred, due to social, economic and medical progresses, with the establishing, for example, of Social Determinants of Health (SDH). SDH have been deeply analysed in the thesis, representing a clear evidence of both the increased awareness of the multifaceted aspect of public health and of its interdisciplinarity, highlighting the necessity for a systemic approach in order to have a fully protected and implemented public health.

I would like to conclude this master thesis evidencing one last time how the evolution of the concept and discipline of public health clearly highlights how in such an interconnected society as the one in which we live in, political and diplomatic actions, with international coordination and cooperation are ever more necessary in order to grant a respectful life to every human being. The complexity in reaching a full wellbeing, nowadays definable as the final objective of public health policies, with national states and international organisations aiming at increasing the life quality of each citizen, request to widen the concept of public health. United Nations Agenda 2030 and the European Union "European Health Union" projects, both looking, despite the different areas of interest, to an increase in public health, evidence how international cooperation, future oriented vision, and a systemic approach are essential and fundamental aspects to be minded in order to make public health policies effective and efficient.

I would like to conclude spending some last words to the current turmoiled international scenario, in which, despite the numerous efforts aiming at a full implementation of public health, it seems to have being lost an essential factor necessary to grant the full enjoyment of the rights promoted by public health policies, peace.

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