ENVIRONMENTAL AND SOCIAL SYSTEMS
ASSESSMENT for
Program-for-Results: Improving Quality and Efficiency of Health Services in Croatia

(version cleared with the Client)

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Executive Summary

THE PROGRAM’S CONTEXT

The Government of the Republic of Croatia and the World Bank are currently engaged in the preparation and development of a Program-for-Results (PforR) loan named “Improving Quality and Efficiency of Health Services in Croatia” (hereinafter Program).

The Program is in line with the adopted National Health Care Strategy 2012–2020 (NHCS, 2012) which identifies the strategic problems and priorities for the health care sector in the country. The Strategy was adopted by the Croatian Parliament in 2012. Further on, its findings, objectives, priorities and measures were verified through a wide consultation process involving almost 300 experts and representatives of all key and all other interested stakeholders, from professionals within the system to the widest public and patients.

The baseline situation addressed by the Program is well indicated by the following five main strategic problems of the Croatian healthcare system identified by the Strategy: 1) Poor connectivity and insufficient continuity within the health care system; 2) Uneven or unknown quality of health care; 3) Insufficient efficiency and effectiveness of the health care system, 4) Poor or uneven accessibility of health care, and 5) Relatively poor health indicators. The fact that system is also financially unsustainable (as indicated by constant deficit and accumulated debts which pose substantial burden on the government budget), while at the same time there is also great amount of dissatisfaction with the system (patients complaining on long waiting lists and poor accessibility of the services; employees are currently involved in prolonged strike unsatisfied with their status) indicates great urgency and inevitability of reforms that would start solving above listed problems.

THE PROGRAM FOCUS AND EXPECTED OUTCOMES

The Program will support implementation of five out of the eight Strategic Priorities defined in the Strategy. More concretely, the priority measures / activities, which will be supported by the Program, are focusing on the following three main areas: 1) the health facility network, which will be rationalized – i.e. reorganized, right-sized, optimized, modernized, better managed – in order to become more efficient and effective in providing services better tailored to the needs of the citizens; 2) the health care offered to the population, the quality of which will be improved by means of more rational resource allocation practices and better standards and quality controls mechanisms which will allow the offer of higher guarantees to users; 3) the financial stability of the health sector, which will be promoted.

The Program’s expected outcomes are specified by the following ten Disbursements Linked Indicators: 1) number of acute care beds reduced by 20% by their either conversion in social or palliative or daily or long-term beds, or closure; 2) implementation of two pilot substantial “hospital reshaping schemes”; 3) financial consolidation of 80% of hospitals; 4) 15% (the baseline is 0%) of all surgeries included in the pre-defined lists of elective surgeries performed as ambulatory surgeries; 5) 40% (the baseline is 0%) of rationalized hospitals, among the best performing hospitals based on explicit key performance indicators (KPI) and quality indicators (QI); 6) 70% (the baseline is 0%) of HZZO-contracted hospitals accredited; 7) 90% (the baseline is 20%) of doctors noncomplying with HZZO prescription patterns engaged on a person-to-person basis in order to discuss probably needed corrections; 8) 60% (the baseline is 0%) of
public procurement made through centralized procurement; 9) 50% (the baseline is 0%) of general practitioners working in group practices; 10) 60% (the baseline is 0%) of hospitals with surgery wards establishing quality- and safety-related sentinel surveillance schemes.

THE MAIN ESSA CONCLUSION
The general ESSA finding is that the Program, with its focus on needs of patients, removal of inefficiencies and improvement of the quality of provided healthcare services, is not a threat, but an opportunity to improve currently unsatisfying environmental and social performances of the Croatian healthcare system, serving as a framework for thorough integration of environmental and social considerations into the urgent and unavoidable reform processes.

MORE SPECIFIC DESCRIPTIONS OF THE ENVIRONMENT-RELATED SCREENING, ASSESSMENTS AND RECOMMENDATIONS
As the Program is supporting implementation of the priority measures identified by the National Healthcare Strategy, which did not pass through any kind of Strategic Environmental Assessment procedure explicitly addressing potential environmental issues, implemented Environmental Risks Screening Exercise consisted of: 1) the standard task of identifying and assessing potential environmental impacts of the currently foreseen Program’s activities; 2) environmental screening of the Croatian healthcare sector in order to check whether there are some environment related priorities associated with the healthcare sector, overseen by the Strategy and therefore also not foreseen by Program, while theirs importance and urgency fully justifies their inclusion among the sector’s top priorities that should be addressed by the Program.

The screening focused on the two main identified environment-related aspects of the Croatian healthcare system. The first is that healthcare in general is energy- and resource-intensive sector with significant environmental footprint and potentially significant negative impacts. More specifically, medical facilities consume significant amount of energy, water, food, cleaners, pharmaceuticals, various chemicals and equipment containing toxic and radioactive materials. On the output side, it generates significant amounts of waste, including hazardous medical waste, radioactive waste, wastewater and emissions into air. The second is that some of its segments – primarily 1) Ministry of Health’s Directorate for Sanitary Inspection; and 2) Health Ecology Service within the Croatian Institute of Public Health and network of Counties Public Health Institutes – play significant roles in the overall national environmental protection system, related to the area of Environmental Health.

The conclusion from the first part of the screening is that the Program, as currently conceived, has neither negative nor positive environmental impacts. Namely, regarding negative impacts, the whole focus of the Program on improving quality and efficiency through improved management, reorganization, modernization, performance monitoring and control, as a side effect, very likely decreases probability of environmental misbehavior within the system. However, although Program contributes to creation of the context in which measures leading to positive environmental impacts are more probable, environmental measures and targets that would imply them are not explicitly mentioned in the Program, which – taking into consideration relatively weak reform management capacity within the system, and tremendous challenges of foreseen reforms – makes them very improbable.
The second part of the screening exercise screened Croatian healthcare system, looking for measures of the following three types which arguably deserve to enter the Program: A) measures that are greening foreseeable Program’s measures, thus securing that there will be no missed opportunities for win-win outcomes, in sense of achieving both desired initial goal and potential environmental goals as co-benefit; B) measures addressing environmental issues whose seriousness requires urgent intervention; and C) measures with the “high returns” on relatively small invested resources.

A number of candidate measures has been identified, partially also because the screening of the Croatian healthcare system was done against the Environmental Best Practice in Healthcare which has been already for more than a decade promoted by WHO and many other organizations under the agenda of the Green Healthcare sector as one of the leaders in transition to more sustainable societies and economies. The measures have been identified in all standard environment-related areas, including: Energy efficiency; Green design; Renewable Energy Resources; Water conservation; Green public procurement; Food related measures; Medical waste management; Radiological safety and radioactive waste; as well as related to the functioning of the Ministry’s Sanitary inspection and Health Ecology Services within the Public Health Institutes.

Appreciating the Program’s approach that narrowed focus of its’ intervention on the sector’s top priorities in order not to disperse the system’s capacities, resources and attention on too many reform tasks, next phase of the assessment narrowed down on the following five themes that were assessed as the highest priority themes: 1) Energy efficiency; 2) Medical waste management; 3) Radiological safety within the medical facilities and radioactive waste; 4) The areas under the jurisdiction of the Sanitary inspection, including: chemicals and biocides safety, environmental noise protection and protection from nonionizing radiation; 5) Environmental Health & EH Laboratory Services. Nevertheless, the wider picture with all the candidate measures was taken into account in formulation of the following ESSA recommendations related to the Environmental aspects of the Program.

Two measures are strongly recommended for inclusion in the Program, based on the adopted criteria. These are: 1) Establishment and implementation of Program for improvement of Energy efficiency in the Healthcare sector – based on the above listed criteria A and C; and 2) Preparation and implementation of projects improving radiological safety within the medical facilities – based on the criteria B and C.

Additional three measures were strongly recommended for inclusion in the next upgrade of the National Health Care Strategy and forthcoming programs supporting its’ implementation, as measures that do not qualify by the adopted criteria, which are however of critical importance for systematic long term greening of the Healthcare sector in Croatia, which should become one of the objectives in the National Healthcare Strategy. These are 1) Initiation of the comprehensive long-lasting program dealing with the continuous active greening of the Croatian healthcare sector; 2) Securing sufficient capacity of the Sanitary inspection by reassignment of some staff currently employed in Health ecology service of Public Health Institutes; 3) Upgrading of the Health Ecology Services from current status of the provider of EH laboratory services to the main implementer and coordinator of wider set of standard EH tasks and projects.

MORE SPECIFIC DESCRIPTIONS OF THE SOCIAL ASPECTS-RELATED SCREENING, ASSESSMENTS AND RECOMMENDATIONS

The Program’s social system was assessed as adequate without substantial negative impacts on the society. Overall risk profile is assessed as moderate as the Program is mainly focused on the
improvements and better tailoring of the health care services to the needs of the Croatian citizens, better standards and quality control mechanisms offering higher guarantees to the users and promotion of the financial stability of the health sector.

There are no adverse social impacts associated with land acquisition and involuntary resettlement as the Program will not finance any construction of new hospital buildings but rather small rehabilitation works within the existing hospital structures, if deemed necessary.

Though Croatia has appropriate health policies with universal access to preventive and curative health services, the screening of potential social impacts deals with four main themes. The first one is related to the challenges of the proposed organizational changes and likely internal and external resistances to these changes. The second group of considerations of likely social impacts of the Program supported reforms are concerned with the issues related to social inclusion and equity in access to the health care services. The third are issues related to social accountability of the health care system, both in implementation of the foreseen reforms and in the functioning of the reformed system. The forth group of likely social impacts of the Program supported reforms’ are impact on the employees – medical and nonmedical staff within the reformed system.

There are several acts prescribing responsibilities, tools and procedures for health care system reforms. Also framework for the envisioned changes is defined by the Health Care Act, the Compulsory Health Insurance Act and Patient’s Rights Protection Act. Key documents which have to be changed and adjusted, with the Program objectives and basic health care principles, are the National Health Plan (NHP) as the medium-term planning tool, the Plan and Program of Health Care Measures and the National Health Care Network. Based on the present legal and organization framework key taskforce stakeholders for the Program implementation are defined and risk of significant negative impacts are limited.

The health care system changes are based on participatory approach. Patients’ rights protection procedures and grievance mechanism are developed and provide significant level of public accountability. Positive examples are the National Health Care Strategy 2012-2020 development process, meetings of patients’ representatives once a week with the Minister and public free phone services for patients’ complaints so-called “White phone” (Bijeli telefon) established by the Ministry of Health. A patient who considers that one of his/her rights has been violated may make a complaint to the head of the health care institution in which the alleged violation took place. Further, patients who are not satisfied with the measures taken to protect their rights can seek further their rights from a relevant professional chamber or the Minister of Health (via e-mail or phone).

There are several legal sources for regulating potential retrenchment /lay-offs of the medical or nonmedical staff, including the Labor Act, the collective agreements or specific measures/ program developed for specific workforce group.

The National Health Care Strategy 2012-2020 addressed possible threats for future reforms: lack of understanding and rejecting the need for reform measures, undermined trust in public sector institutions and regionally uneven economic strength. However, there are ongoing projects like development of a hospital master plan, a health human resources strategy and specific projects in the area of information and communication technology (ICT) aimed at improving the management of the health system which could bridge recognized gaps and threats.
1 Description of the Program with an identification of its environmental and social aspects and potential impacts

1.1 Program’s objectives, scope and activities

The Government of the Republic of Croatia and the World Bank are currently engaged in the preparation and development of a Program-for-Results (PforR) loan named “Improving Quality and Efficiency of Health Services in Croatia” (hereinafter Program).

The Program is in line with the recently adopted National Health Care Strategy 2012–2020 (NHCS, 2012) which identifies the strategic problems and priorities for the health care sector in the country. The Strategy was adopted by the Croatian Parliament. Further on, its’ findings, objectives, priorities and measures were verified through a wide consultation process involving almost 300 experts and representatives of all key and all other interested stakeholders, from professionals within the system to the widest public and patients.

The Table 1 bellow lists the strategic problems of the Croatian Health Care System identified in the Strategy, which also can serve as description of the Program’s problem context and baseline.

Table 1. Five strategic problems of the Croatian Health Care System identified in National Health Care Strategy 2012–2020 (NHCS, 2012)

<table>
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<tr>
<th>STRATEGIC PROBLEM</th>
<th>SOME OF THE KEY ASPECTS OF THE PROBLEM</th>
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| Poor connectivity and insufficient continuity within the health care system | - Information systems developed in isolation (some 60 different registries within the system) do not allow analysis involving data from various systems, which is required for more efficient and effective management, including staff sharing, common use of equipment, unified procurement, cooperation between primary health care and hospitals, between doctors and pharmacists etc.;  
- Poor connectivity and comprehensiveness in primary health care, poor cooperation among teams, almost no group practices and interdisciplinary teams;  
- Unclear continuity across the three levels of health care, with patients often skipping primary level and going directly to the tertiary level, and/or tertiary level dealing with treatments that could be more efficiently dealt with on the secondary level;  
- Poor vertical continuity in education of the medical professionals; medical school graduates better equipped for work on secondary and tertiary level than on the primary level of the health care.  
- Insufficient connection of the system with its wider social context (civil society, other sectors of government) |
| Uneven or unknown quality of health care                | - Despite some efforts, no medical facility with external accreditation of healthcare quality; poor capacity for systematic monitoring, analysis and measurement of quality; Labour law inappropriate for awarding of a good quality work and sanctioning of a poor quality work; no quality and result based financing of medical facilities;  
- Poor effectiveness of established QC mechanisms in hospitals; Unclear, partially unfeasible or obsolete Quality Standards and Norms  
- No validated accreditation standards; insufficient capacity of the established Agency for Quality and Accreditation in Health Care and Social Welfare, no systematic monitoring and collection of data for quality indicators on all levels of the healthcare; existing data suggest uneven quality of healthcare in different medical facilities  
- Unregulated combined employment of medical professionals in medical facilities and medical schools, as well as increased number of medicine students and university programs causing lower quality of education |
| Insufficient efficiency                                 | - Low efficiency both on the healthcare supply and demand sides: on the supply side mainly caused by financing based on capacities and inputs (payments per occupied bed in hospitals, or
and effectiveness of the health care system per registered patient in primary healthcare); on demand side caused by population ageing and existing health insurance system with low proportion of individual co-payments and many categories of citizens exempted from co-payments. thus encouraging greater demand for health services;

- General low transparency of financing of healthcare system; poor management of the medical facilities caused partially by lack of staff with appropriate interdisciplinary expertise, partially by lack of established framework allowing performance monitoring, analysis, planning and management; spending on medicaments too high and often unjustified, partially caused by lack of formal Health Technology Assessment system (HTA) and clinical guidelines; payment period too long.

- Health facility network not sufficiently tuned neither to changing needs created by epidemiologic and demographic shifts in Croatia nor to advances in medical technologies

- Hospitals infrastructure too large, poorly maintained, with low energy efficiency.

- Sophisticated expensive equipment commonly used only during one work shift; expensive acute beds often used for long-term and palliative care; Capacities of Emergency Medical Service often used for transport of the patients; insufficient focus on prevention, insufficient use of pharmacists’ expertise in healthcare, particularly in order to rationalize use of medicaments.

- No monitoring and control of job attendance

- Despite objective lack of medical staff within the system, the existing human resources could be used more efficiently; no task shifting from doctors to nurses; low staff mobility within the system; almost completely unregulated and undeveloped voluntary work.

| Poor or uneven accessibility of health care | - Shortage of medical staff within the system is structural problem that causes lower accessibility of healthcare, especially in rural areas and on islands, however also in some smaller urban centers. The situation could even worsen because of the relatively high average age of medical staff and decreased number of young professionals entering the system.
- Medical professions becoming less attractive; particularly some jobs within the system that are proportionally less paid; or for specializations for which education has to be self-financed.
- Network of pharmacies poorly developed in rarely populated area in which it is not profitable.
- Although officially all citizens have rights on all healthcare services, in reality there are great discrepancies in accessibility, partially due to insufficiently transparent waiting lists; Plan and program of the healthcare services from the mandatory health insurance in obsolete, too wide and hard to fulfill in reality. |
| Relatively poor health indicators | - Although general mortality rate and specific mortality rate from some diseases are falling, they are still higher than EU averages;
- Especially worrying is current situation related to the health behavior within the population and associated risk factors (smoking, too high body weight, alcohol abuse), indicating poor culture of taking responsibility for one's health.
- Toughening economic and social situation presents further threat to the population general health. |

The fact that system is also financially unsustainable (as indicated by constant deficit and accumulated debts which pose substantial burden on the government budget), while at the same time there is also great amount of dissatisfaction with the system (patients complaining on long waiting lists and poor accessibility of the services; employees are currently involved in prolonged strike unsatisfied with their status) indicates great urgency of reforms that would start solving above listed problems.

The Program Improving Quality and Efficiency of Health Services in Croatia will support implementation of five out of the eight Strategic Priorities defined in the Strategy: SP2 – Strengthening and better use of the human resources within the healthcare system; SP3 – Strengthening of the management in the healthcare system; SP4 – Reorganization and restructuring of the health facilities network; SP5 – Promotion of the quality in the healthcare system; SP7 – Financial stability / sustainability of the system.
More concretely, the priority measures identified by the Strategy, which will be supported by the Program, are focusing on the following three main areas:

1. the health facility network, which will be rationalized – i.e. reorganized, right-sized, optimized, modernized, better managed – in order to become more efficient and effective in providing services better tailored to the needs of the citizens;
2. the health care offered to the population, the quality of which will be improved by means of more rational resource allocation practices and better standards and quality controls mechanisms which will allow the offer of higher guarantees to users;
3. financial stability of the health sector, which will be promoted.

Table 2 lists strategic actions foreseen by the Program in each of the areas.

**Table 2. The Strategic actions included in the Program, grouped in the three main areas.**

<table>
<thead>
<tr>
<th>THE PROGRAM’S FOCUS AREA</th>
<th>THE STRATEGIC ACTIONS INCLUDED IN THE PROGRAM</th>
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<tbody>
<tr>
<td>Rationalized – more efficient and effective – health facility network, better tailored to the needs of the citizens</td>
<td>Development and implementation of the Hospital master plan which will define regional networks that will use existing resources and capacities more efficiently and effectively. It includes: restructuring, reshaping, merging of the existing facilities with all associated governance and management changes; increasing the provision of secondary specialized ambulatory diagnostic and treatment services intensifying the use of non-invasive diagnostic and treatment procedures; expanding day care services and ambulatory services; increasing the long term care for palliative and rehabilitation services and social care that will be delivered through specialized units/facilities; decreasing the number of acute care beds which are currently being used for services which could be more efficiently and effectively provided by aforementioned specialized facilities. DESIRED IMPACTS: the service delivery model adjusted to population needs and existing resources (HR and technology); the health facility network delivering an optimal mix of services in the right place at the right time; the health facilities are endowed with a clear institutional status, competent professionals to manage them, and the corresponding tools.</td>
</tr>
<tr>
<td>Improved, standardized, controlled and verified quality of healthcare services</td>
<td>Improvement of the quality, equity, continuity, and co-ordination of care across the health system by development of clinical protocols and care pathways for more frequent health problems, including also standards needed to implement quality control mechanisms, to lead the access to the different levels within the referral networks and to train and retrain the human resource. Implementation of technical/clinical audits and payment mechanism to monitor and incentivize the use of clinical guidelines; detecting and recording of specific “sentinel events for quality” within a fully implemented surveillance system. Implementation of a hospital accreditation mechanism as a condition to remain in operation. Implementation of HTA (Health Technology Assessment system) as a support to decision makings on public resource allocation. DESIRED IMPACTS: the patients’ satisfaction increased by a perception of increased responsiveness; the health status of the population improved; and regional disparities in health outcomes declined.</td>
</tr>
<tr>
<td>Promoted financial sustainability of the health sector</td>
<td>Reducing costs and increasing efficiency by: deeper implementation of central procurement of medical and nonmedical supplies, including framework contracts and potentially e-procurement; outsourcing of non-medical services; a review of comparative costs of different modalities of care (ambulatory compared to inpatient procedures) in search for cost-effective savings in order to adjust amounts to be paid for each; strengthened performance- linked component in payments to hospitals and primary care to create incentives to reduce referrals and improve quality of care; Building MoH capacity for preparation of projects proposals for financing by EU structural funds DESIRED IMPACTS: improved system’s efficiency and a reduction of total public expenditures in health as proportion of total public expenditures.</td>
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Clearly, the most tangible and specific description of the Program’s expected outcomes is given by its set of Disbursement Linked Indicators (DLIs) – i.e. the set of targets whose fulfillment trigger release of the specified percentage of Program’s loan – listed in the Table 3.

Table 3. Disbursement Linked Indicators (DLIs) of the Program-for-Results “Improving Quality and Efficiency of Health Services in Croatia”

<table>
<thead>
<tr>
<th>DLI</th>
<th>Description</th>
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<tr>
<td>DLI 1.</td>
<td>Total number of hospital acute beds contracted by the HZZO classified as “acute care beds” beds to be reduced by converting some of them into “social beds”, “long-term” or “palliative care beds”, “day care posts”, or closing them down (from baseline 15,930 to 12,800 in year 5)</td>
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<tr>
<td>DLI 2.</td>
<td>At least two substantial “hospital reshaping scheme” subprojects implemented in line with Hospital Master Plan. Hospital reshaping scheme means design and operationalize subprojects with substantial adjustment in the way (hospital) services are organized, managed and funded. For example, a “3 X (1+1)” scheme would involve three institutions operating as hospitals today that become one substantially more modern hospital plus one fully-fledged “ambulatory and day care center” and a third one that would provide much less complex services.</td>
</tr>
<tr>
<td>DLI 3.</td>
<td>Percentage of hospitals that became financially consolidated within the re-defined institutional architecture, in line with the Master Plan. By the year 5, 80% of hospitals (the baseline is 0%) to achieve stable functioning and remain with zero amount of debt during the preceding year.</td>
</tr>
<tr>
<td>DLI 4.</td>
<td>15% (the baseline is 0%) of all surgeries included in the pre-defined lists of elective surgeries performed as ambulatory surgeries in the last six months and financially stimulated by HZZO. The list of elective surgeries is still under discussions with the MoH. These could include surgeries such as nasal vegetation/polyps, inguinal/femoral hernia, tonsillectomy, urology procedures: transurethral prostatic resection, laparoscopic cholecystectomy, thyroid removal, parathyroid removal</td>
</tr>
<tr>
<td>DLI 5.</td>
<td>Percentage (40% by the year 3, the baseline is 0%) of rationalized hospitals, among those contracted by the HZZO and subject to technical audit in the previous year, publicly disclosed as best performing hospitals based on explicit key performance indicators (KPI) and quality indicators (QI) to manage NCDs as defined by the HZZO. The technical audit assumes comparative analysis and benchmarking of hospital performance, based on hospital invoices sent to HZZO, with main results made publicly available.</td>
</tr>
<tr>
<td>DLI 6.</td>
<td>Percentage (70% by the year 4, the baseline is 0%) of HZZO-contracted hospitals accredited in a basic MoH-defined but independently run accreditation process.</td>
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<tr>
<td>DLI 7.</td>
<td>Percentage (90% by the year 2, the baseline is 20%) of doctors for whom HZZO-defined prescription patterns in the last six months were found to be “non-satisfactory” (i.e. is above a pre-defined average spending limit that accounts for number, gender, and age of their patient population) and with whom corrective course of action was discussed on a person-to-person basis.</td>
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<tr>
<td>DLI 8.</td>
<td>Percentage (60% by the year 3, the baseline is 0%) of total public spending on medical consumables, drugs and devices for hospital (inpatient and outpatient) services made through centralized procurement/ framework contracts and disclosed on the Ministry of Health website in simplified and understandable format.</td>
</tr>
<tr>
<td>DLI 9.</td>
<td>Percentage (50% by the year 3, the baseline is 0%) of general practitioners working in group practices.</td>
</tr>
<tr>
<td>DLI 10.</td>
<td>Percentage (60% by the year 3, the baseline is 0%) of hospitals with surgery wards that have established quality- and safety- related sentinel surveillance schemes showing the rates of specific events: (i) avoidable, non-traumatic, diabetes-related lower-limb amputations and (ii) postoperative pulmonary embolism and (iii) deep vein thrombosis.</td>
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Clearly, DLIs 1,2,3,4,9 relates to the first focus area of intervention – i.e. better organized health facility network for improved efficiency and effectiveness; DLIs 5,6,7,10 to the second – i.e. monitored, controlled, actively promoted and verified quality of services; and DLI 8 to the third – i.e. more prudent financial management.

Regarding the type of activities, specified focus areas and targets / DLIs suggest mainly activities dealing with changes in organization, procedures and management that should bring improved efficiency, effectiveness and quality. Some physical works can be expected as part of reorganization / rightsizing /
modernization of the health facility network, however most likely dealing with reconstruction of the existing premises, or some minor appendices to existing premises improving their overall functionality.

1.2  Key implementing agencies

1.2.1  The lead partner and main coordinator of the Program implementation: Ministry of Health

At the central level, the Ministry of Health is responsible for: (i) health policy, planning and evaluation, including the drafting of legislation, regulation of standards for health services and training; (ii) public health programs, including monitoring and surveillance of health status, health promotion, food and drug safety, and environmental sanitation; and (iii) regulation of capital investments in health care providers in public ownership. In particular, it draws up legislation for consideration by the Parliament, produces the annual national health plan for the country, monitors health status and health care needs, sets and regulates standards in health facilities and supervises professional activities such as training. Also Ministry participates during preparation and implementation phases of the health related projects which will be funded by EU funds or any other international financial support. The Ministry manages public health activities including sanitary inspections, supervises food and drug quality and engages in the promotion of health education of the population. It also nominates the chairs of the governing councils and appoints the majority of the board members in state-owned health care facilities.

1.2.2  Other key stakeholders

1.2.2.1  Ministry of Finance

The Ministry of Finance is responsible for the planning and management of the government budget, which includes the approval of the central budget transfers to the CHIF as well as the Ministry of Health. Therefore, the Ministry of Finance plays a key role in determining the overall level of public spending on health care.

1.2.2.2  Croatian Health Insurance Fund (CHIF)

Established in 1993, the CHIF is the single health insurance fund in the mandatory health insurance (MHI) scheme is responsible for contracting health care services provided within the MHI scheme. The CHIF is also responsible for the distribution of sick leave compensation, maternity benefits and other allowances as regulated by the Croatian Health Insurance Act. As the main purchaser of health services, the CHIF also plays a key role in the definition of basic health services covered under statutory insurance, the establishment of performance standards and price setting for services covered under the MHI scheme.

1.2.2.3  The Croatian National Institute of Public Health (CNIPH) and county institutes

The CNIPH main activities include: provision of statistical research on health and health care services; maintaining public health registers; monitoring and analysis of the epidemiological situation; provision, organization and conduct of preventive and counter-epidemic measures; planning and control of disinfection and pest control measures; planning, control and evaluation of the implementation of compulsory immunizations; provision of immune-biological activities of national interest; testing and control of the safety of drinking water, waste water, food and common use objects; and other public health activities requested by the Ministry of Health.
1.2.2.4 Counties and the city of Zagreb

Local governments own and operate most of the public primary and secondary health care facilities, including general and special hospitals, county health centers, public health institutes and community health organizations (home care and emergency care units). While these facilities receive operating expenditure through their contracts with the CHIF, local authorities are responsible for financing the maintenance of their infrastructure and, increasingly, for capital investments. Under the Government’s decentralization policy implemented since 2001 local governments are expected to play an increasing role in the coordination and management of health services at county and municipal levels. In a line with this, since 2009, they have been in charge of granting concessions for public health care services at primary level. Since 2012, Ministry of Health implements program for hospital financial consolidation. As a part of that process, all local governments whose hospitals are involved in the program have to transfer their governing rules and responsibilities to the Ministry of Health which appoints new governing council.

1.2.2.5 Professional chambers

Croatia has statutory health care professional chambers for physicians, dentists, pharmacists, biochemists, nurses, midwives, physiotherapists, logopeds and one integrated for the group of professions. All the chambers are established by the relevant faculties and professional associations. All university-educated health professionals and nurses must have membership in one of the chambers. In turn for that the chambers are responsible for professional registration and maintenance of professional standards. The chambers also express professional opinions on a variety of issues and provide advice on licensing of private practices and on opening and closing of health institutions.

1.2.2.6 Alliance of Patients' Organizations /KUZ- Koalicija udruga u zdravstvu/

Alliance of Patients' Organizations is the umbrella coalition of patients associations and NGO-s and coordinates most of them. The Alliance participates in all key debates and projects related to the health care issues.

1.2.2.7 Ministry of Social Policy and Youth (MSPY)

MSPY is responsible for the planning, monitoring and stewardship of the entire system of social protection services. Among duties key responsibilities related to the program are institutional services and benefits or allowances which could have direct impact to the equity in health.

1.2.2.8 Ministry of Labour and Pension System (MLPS)

Ministry of Labour and Pension System combines in one place all the rights related to employment, labor relations and pension insurance. Ministry of Labour and Pension System prepares and proposes measures, activities and strategies in the areas of employment, labor market and active employment policy, health and safety of workers, mandatory and voluntary pension and social security, social dialogue and the preparation and implementation of programs and projects under the European Union. Ministry of Labour and Pension System is responsible for the social partnership and relations with trade unions and employers' associations in the field of labor relations, labor and employment.

1.2.2.9 Trade unions (for Health Care Workers)

Trade unions are organized around three key professional groups: medical doctors, nurses and other health care workers. They negotiate with government as independent or allied stakeholders.
1.3 Program’s potential social and environmental impacts

1.3.1 ENVIRONMENTAL SCREENING

As the Program is supporting implementation of the priority measures identified by the National Healthcare Strategy, and as the strategy did not pass through any kind of Strategic Environmental Assessment procedure explicitly addressing potential environmental issues – because Croatian Environmental Protection Act (OG 80/13, Article 63) does not require SEA for Strategies, Programs and Plans related to the Healthcare sector – implemented Environmental Risks Screening (ERS) exercise had to answer not the standard one but two questions. Namely, it had to do the standard ERS task of identifying and assessing potential environmental impacts of the currently foreseen Program’s activities. However, because Strategy did not pass any kind of systematic environmental appraisal – it also had to check whether there are some environment related priorities associated with the healthcare sector, overseen by the Strategy and therefore also not foreseen by Program, while theirs importance and urgency fully justifies their inclusion among the sector’s top priorities that should be addressed by the Program.

In the following three sections, first the main environment-related aspects of the Croatian Healthcare sector are identified and explained. Then, potential environmental impacts of the currently foreseen Program activities are identified and assessed. Finally, more comprehensive and detailed analysis of the various environment related aspects of the Croatian Healthcare sector is done in order to identify potentially overseen priorities that merit inclusion among the Program activities.

1.3.1.1 Environment related aspects of the Croatian health care system

The Croatian health care system is connected to the subject of environment in the two main ways. The first one is that healthcare in general is energy- and resource-intensive sector with significant environmental footprint and potentially significant negative impacts. More specifically, medical facilities consume significant amount of energy, water, food, cleaners, pharmaceuticals, various chemicals and equipment containing toxic and radioactive materials. On the output side, it generates significant amounts of waste, including hazardous medical waste, radioactive waste, wastewater and emissions into air. According to US Energy Information Administration, hospitals are third only to food service and food sales in terms of consumption of energy per square meter in US. The National Health Service in England has calculated that it is the largest public sector contributor to climate change in Europe, with carbon footprint of 21 million tons annually. There is no reason to believe that the Croatian healthcare system is an exception to the rule. The existing data on waste generation (recent reports issued by Environmental protection agency and Environmental protection inspection) and on resource efficiency (findings of the UNDP House in order project) assessed inefficiency, i.e. saving potential of up to 30-50%!

The general context of the growing environmental challenges on one side and growing environmental awareness on the other created, both globally and on EU level, a number of initiatives recognizing the need and opportunities for greening of the health sector, as well as those already implementing concrete changes (such as Health Care Without Harm international coalition; Practice Greenhealth network assembling over 7,000 medical facilities in USE; British Centre for sustainable healthcare; its’ CleanMed Europe conferences on sustainability within the health care sector, etc). A recent publication issued by the World Health Organization – Healthy hospitals, healthy planet, healthy people – recognizes that health sector, as one of the most trusted and respected sections of society and one of the largest employers and consumers, has both a responsibility and an opportunity to play a leading role in ongoing transitions to more environmentally sustainable economies and societies. It also provides a list of already proven
measures, as well as examples of medical facilities that successfully implemented these measures which improved environmental efficiency, with significant health, economic and social co-benefits. The listed measures include:

- **ENERGY EFFICIENCY MEASURES**, such as better insulation of buildings, installation of the highly efficient modern Combined Heat and Power (CHT) technologies, switching to more efficient lighting and other electrical appliances, installation of energy-saving gadgets such as motion sensor lighting and automatic doors, switching thermostat heating and cooling temperature by couple of degrees, reducing “stand-by” energy use;
- **GREEN BUILDING DESIGN MEASURES** such as suitable siting and orientation, use of environment friendly construction materials; green landscape on the site; use of day lighting and natural ventilation, green roofs, etc;
- **ALTERNATIVE ENERGY GENERATION ON SITE**, primarily solar panels and / or biomass boilers for heat generation and pumping and heating water;
- **REPLACEMENT OF CURRENTLY USED TOXIC MATERIALS** with their non-toxic or less toxic substitutes;
- **TRANSPORTATION MEASURES** such as effective siting and programming of medical care delivery, using high-efficiency or alternative-fuel vehicles, training and incentivizing staff in fuel-efficient driving, establishing necessary infrastructure and encouraging hospital staff and patients to use bicycles, public transportation and carpoolls;
- **FOOD RELATED MEASURES** such as increasing percentage of seasonal, non-processed, fresh, locally produced, organic products, decreasing amount of meat in hospitals menus, minimizing and composting food waste;
- **WASTE MANAGEMENT MEASURES** such as proper management of the hazardous medical waste (infectious, chemicals, radioactive, toxic, etc.); waste minimization by purchasing goods with less packaging, using reusable rather than disposable products; selective waste collection, recycling, composting;
- **WATER CONSERVATION MEASURES** such as using of water-efficient fittings and technologies, monitoring of water use and quick repair of leaks, eliminating purchase and sale of bottled water where high quality potable water is available, using partially recycled waste water for irrigation, landscape design that does not require intensive irrigation, etc.
- **GREEN PROCUREMENT PRACTICE**, which includes integration of the environmental / sustainability criteria when selecting goods and services for purchase. As a major consumer, medical facilities have both responsibility to decrease their own ecological footprint, and high leverage power in creation of markets for greener goods and services;
- **ESTABLISHMENT OF THE FORMAL ENVIRONMENTAL MANAGEMENT SYSTEM** as a framework for organization and implementation of all aforementioned measures, creating synergy that increases efficiency and effectiveness of them all. Such system also secure framework for suitable engagement and support of the top level leadership.

Some of these measures require substantial investments (e.g. major retrofitting of the building), however, many of them – such as e.g. established system and procedures for closer monitoring of various aspect of environmental performance, staff education on benefits of environmental friendly behavior, better organization, greening of the procedures (e.g. greening of the procurement practices by integration of environmental criteria into procurement procedures), identification of the leaks in the system, less
expensive retrofitting and fixtures – require relatively small investments that pay off in a year or so, and
then keep saving money that can be invested in something else.

The second environment related aspect of the Croatian health care system is that some of its
segments play significant roles in the overall national environmental protection system, more precisely in
the area of ENVIRONMENTAL HEALTH, which is important segment of the Ministry of Health
mandate in protection of the public health interest.

More specifically, Environmental Health was defined by the First European Conference on the
Environment and Health (WHO, 1989) as a branch of public health dealing with those aspects of human
health and disease directly or indirectly caused by biological, chemical, physical and psychosocial
environmental factors. The area of environmental health includes subjects of water and air quality, food
safety, common use items safety, chemical safety, safety related to biocides and other toxic materials,
protection from noise pollution, protection from ionizing and nonionizing radiation.

The two entities within the system with significant mandates in these areas are:

1. Ministry of Health’s DIRECTORATE FOR SANITARY INSPECTION; and
2. HEALTH ECOLOGY SERVICE within the Croatian National Institute of Public Health and network
   of Institutes at regional / county level

These two are actually the main providers of the environmental health services, which are defined as those
services that are implementing environmental health policies through monitoring and control activities;
they carry out that role by promoting the improvement of environmental parameters and by encouraging
the use of environmentally friendly and healthy technologies and behavior. The former is in charge of
control, i.e. inspection task in all above listed areas. The latter is traditionally (and still in reality) the main
provider of environmental health laboratory services, the backbone of official control and monitoring of
environment and human health in Croatia, as it provides services related both to the control required by
the law and performed by different inspections, and to the official monitoring programs.

1.3.1.2 Screening impacts of foreseen Program’s activities

Table 4 summarizes findings of a cross checking of the Program’s DLIs (see for details Table 3) – which
are the most tangible and specific descriptors of both Program’s expected outcomes and associated
activities – against the main environmental aspects of the Health sector identified above.

Table 4. Environmental Risks Screening of the Program: a cross checking of the main foreseen
Program outcomes against the main Health system’s environmental aspects.

<table>
<thead>
<tr>
<th>DLI 1. Total number of hospital “acute care beds” to be reduced (from baseline 15.930 to 12.800) by converting some of them into “social beds”, “long-term” or “palliative care beds”, “day care posts”, or closing them down</th>
<th>I. Health sector as resource consumer and polluter</th>
<th>II. Health sector’s role in environmental protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>++</td>
<td>Planned rationalization, reorganization, modernization and reconstruction is also an opportunity for implementation of some of the listed resource efficiency measures (Energy Efficiency; alternative energy sources, green building design, water conservation);</td>
<td>0</td>
</tr>
<tr>
<td>• Foreseen facility network with less acute care beds, i.e. their substitution by more day care services and ambulatory services</td>
<td>• activities implied by this DLI are not targeting any of the sector’s segments in charge of the issues related to Environmental Health</td>
<td></td>
</tr>
</tbody>
</table>
| DLI 2. At least two substantial “hospital reshaping scheme”* subprojects implemented in line with Hospital Master Plan   
* health personnel and technical equipment relations scheme have to be reshaped vis-à-vis patient demands, and the new roles of the units/facilities within the new referral and contra-referral networks in the health care system / According to the ToR for Hospital master plan project | decreases ecological footprint. |
| | ++  
| | • same as for DLI1 |
| | 0  
| | • same as for DLI1 |

| DLI 3. 80% of hospitals within the re-defined institutional architecture, in line with the Master Plan, financially consolidated – i.e. stable functioning and zero amount of debt during the preceding year |  
| | +  
| | • Financially sound system has less risk of some environmental accidents caused by lack of funds for necessary resources.  
| | • Environment which promotes financially prudent operations, actively seeking for higher financial efficiency will support measures for increased resource efficiency (e.g. Energy efficiency) as they in mid-term or long-term have cost-cutting co-benefits. |
| | 0  
| | • same as for DLI1 |

| DLI 4. 15% (the baseline is 0%) of all surgeries included in the pre-defined lists of elective surgeries performed as ambulatory surgeries |  
| | +  
| | • shortening of the patients’ stay in the medical facility decreases ecological footprint |
| | 0  
| | • same as for DLI1 |

| DLI 5. Percentage (40% by the year 3, the baseline is 0%) of rationalized hospitals, among those contracted by the HZZO and subject to technical audit in the previous year, publicly disclosed as best performing hospitals based on explicit key performance indicators (KPI) and quality indicators (QI) |  
| | +  
| | • better managed, high general performance, high quality medical facility is commonly also has better environmental performance |
| | 0  
| | • same as for DLI1 |

| DLI 6. Percentage (70% by the year 4, the baseline is 0%) of HZZO-contracted hospitals accredited in a basic MoH-defined but independently run accreditation process. |  
| | ++  
| | • This will further contribute to compliance with environmental legislation and maybe also to general energy and environmental efficiency, as accreditation criteria will for sure include full compliance with all relevant legislation, and maybe also additional criteria for environmental excellence |
| | 0  
| | • same as for DLI1 |

| DLI 7. Percentage (90% by the year 2, the baseline is 20%) of doctors for whom prescription patterns were found to be “non-satisfactory”, with whom |  
| | +  
| | • it includes support to more rational drugs prescription practice, which eventually leads to less medicaments disposed in |
| | 0  
| | same as for DLI1 |
corrective course of action was discussed.  

<table>
<thead>
<tr>
<th>DLI 8. Percentage (60% by the year 3, the baseline is 0%) of total hospitals’ public spending made through centralized procurement and disclosed on the Ministry of Health website</th>
<th>environment (through waste water or municipal solid waste)</th>
</tr>
</thead>
</table>
| + | -  
| * centralized procurement practice facilitates gradual introduction of the greener procurement practices in the system | - |  
| * if implemented inefficiently, reorganization of procurement processes can cause problems – primarily delays because of more complicated procedure; lack of responsiveness in the central procurement unit on specific needs of numerous users within the system – in acquiring of the goods and services required for environment-responsible functioning of the system | 0 | same as for DLI1 |

| DLI 9. Percentage (50% by the year 3, the baseline is 0%) of general practitioners working in group practices | 0 | same as for DLI1 |
| --- | --- |
| 0 | -  
| * implied activities has no associated environmental impacts | 0 | same as for DLI1 |

| DLI 10. Percentage (60% by the year 3, the baseline is 0%) of hospitals with surgery wards that have established quality- and safety- related sentinel surveillance schemes showing the rates of specific events. | 0 | same as for DLI1 |
| --- | --- |
| + | -  
| * It contributes to quality of the health care services, which shortens patient’s stay within medical facility, and probability for prolonged stay caused by avoidable complication, which in turn decrease facility’s ecological footprint. | 0 | same as for DLI1 |

LEGEND: +++ major positive impact; ++ positive impact; + minor positive impact; 0 neutral / no associated impacts; - minor negative impact; -- negative impact; --- major negative impact.

The fairest conclusion from the first part of the screening is that the Program, as it is currently conceived, has neither negative nor positive environmental impacts. Namely, regarding negative impacts, the whole focus of the Program on improving quality and efficiency through improved management, reorganization, modernization, performance monitoring and control, as a side effect, very likely decreases probability of environmental misbehavior within the system. The only thing that should be kept on mind is that changes in the system should be properly prepared (i.e. in detail analyzed, planned, staff and management prepared, simulated, piloted), as otherwise reform could result only in deterioration of the current procedures, without replacing them with effective substitutes (as it is mentioned when commenting on centralization of public procurement – see Table 4 for details). On the other side, regarding positive impacts, although Program contributes to creation of the context in which measures leading to positive environmental impacts are more probable, environmental measures and targets that would imply them are not explicitly mentioned in the Program, which – taking into consideration relatively weak reform management capacity within the system, and tremendous challenges of foreseen reforms – makes them very improbable.
1.3.1.3 Screening environment related aspect of the Croatian health care system for potential issues that merit inclusion on the list of priority problems addresses by the Program

Fully appreciating the Program’s approach that narrowed focus of its’ intervention on the sector’s top priorities in order not to disperse the system’s capacities, resources and attention on too many reform tasks, the healthcare sector, operating in line with a well-known credo of “first, do not harm”, cannot afford not to seriously integrate care for environment in its operations. A further argument for serious consideration of the system’s environmental performance and possible ways to improve it is the fact that such improvements commonly have significant health, economic and social co-benefits. Therefore the second part of the screening exercise is screening Croatian healthcare system against the standard set of healthcare environment related aspects listed in chapter 1.3.1.1, assessing whether current situation requires Program’s attention. More concretely, the assessment tried to identify measures of the following three types which arguably deserve to enter the Program:

A. Measures that are greening foreseen Program’s measures, thus securing that there will be no missed opportunities for win-win outcomes, in sense of achieving both desired initial goal and potential environmental goals as co-benefit

B. Measures addressing environmental issues whose seriousness requires urgent intervention;

C. Measures with the “high returns” on relatively small invested resources.

Table 5 lists candidate issues / measures of these types, related to various aforementioned environmental themes relevant for the health care sector.

Table 5. Environmental Screening of the Croatian healthcare system: assessment of the current situation in order to identify issues and associated corrective measures that, based on some of the three predefined criteria, merit their inclusion into the Program.

<table>
<thead>
<tr>
<th>ENVIRONMENTAL THEME</th>
<th>Comment of the situation within Croatian health care sector and candidate measures for inclusion into the Program</th>
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<tbody>
<tr>
<td>I. Themes related to resource-efficiency of the healthcare system</td>
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</table>
| Energy efficiency   | Preparation of EE projects – both within context of the planed reorganization / rationalization of health facility network and for the pipeline of projects for EU funds – should be considered for inclusion in the Program (based on A and C criteria)  

The Healthcare Strategy 2012-2020 actually foresees and stipulates energy efficiency activities as part of the foreseen functional reconstructions of medical facility, within the Priority 4 – health facility network restructuring and reorganization.  

Recent EE related UNDP project House in order identified a lot of space for improvement and did shown a way: established the framework, initiated processes (pipeline of prepared projects in different phases of preparedness).  

EE projects can be co-financed from EU structural funds.  

These projects also contribute to fulfillment of the national targets in EE, set by National Program for EE 2008-2016 and associated National Action Plans (2nd for period until the end of 2013, and 3rd for 2014-2016), all in line with 2006/32/EC energy efficiency directive and EU EE goal of reducing consumption of primary energy by 20% by 2020. |

| Green building design measures | A candidate measure based on A and C criteria.  

All new reconstruction works within the context of planned reorganization should be verified for integration of green building design measures, in line with some of the existing best practice guides / certification schemes (e.g. Green Guide for Health Care). Some smaller reconstruction or cultivation (landscaping, green roofs) for more environmentally sound design of facilities could be included into EE projects prepared for EU co-financing. |
<table>
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<tr>
<th>ENVIRONMENTAL THEME</th>
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</table>
| Alternative energy sources| A candidate measure **based on A and C criteria.**  
A lot of potential for using renewable energy sources (RES) – primarily for heat generation and pumping and heating water: solar panels in coastal areas with higher insulation; biomass boilers in continental parts with lot of biomass from agriculture and forestry.  
These are also types of projects that can be co-financed from EU structural funds.  
These projects also contribute to fulfillment of the national targets in RES (as set by National Action plan for RES (2013-2020)). |
| Water conservation        | A candidate measure **based on A and C criteria.**  
A lot of space for improvement by introduction of some inexpensive fixtures, staff training and water use monitoring.  
Measures can be integrated in projects promoting EE efficiency, as projects dealing with improvement in overall environmental performance of the medical facilities. |
| Green public procurement  | Initiation of Green Public Procurement (GPP) practices, in the context of foreseen Program's activities addressing public procurement system (primarily its centralization) should be considered as candidate measures **based on A and C criteria.**  
As a major consumer on the market, by adoption of the green procurement practices – i.e. procurement that considers environmental friendliness as a criteria in selection of goods and services, and takes into account not only the purchase cost, but estimate of the sum of purchase, use and disposal costs – healthcare sector can help environment by both improving its' environmental performance, and by contributing to strengthening of the national and local markets of green products and services.  
This fact is also recognized by the Strategy 2012-2020, which stipulates adoption of the green procurement practice in the Croatian health-care system operation. |
| Food related measures     | A candidate measure **based on C criteria.** (it should be one of the primary focuses of the Green public procurement within the healthcare system).  
Highest possible quality food is important part of the health care service quality. Health care facilities are major food buyers/consumers. Introduction of more seasonal, fresh, non-processed, preferably organically and locally produced food on the hospital menus contributes both to the quality of health care and benefits of the patients; creation of national organic food market; and environment. Changes in menu does not increase costs, as somewhat higher costs of organic food can be compensated by decreasing amount of meat. It requires only decision, staff training, promotional campaign and established green procurement of food. |
| Medical waste management  | A candidate measure **based on B and C criteria.** The major space for improvement in waste management practices within the medical facilities in the public healthcare network is minimization of generated hazardous medical waste quantities through improved selective waste collection – i.e. prevention of mixing of smaller quantities of hazardous waste with larger quantities of non-hazardous waste. The suggested approach, with effectiveness proven on a number of examples all over the world, is establishment of comprehensive Environmental Management System as a framework for combination of measures including awareness raising and training of the staff, performance monitoring and control, reporting, improvements in waste collection infrastructure.  
Regarding the wider context of the general waste management system, the fair estimate is that the relevant Croatian legislation is harmonized with the EU acquis, however, the practice is lagging far behind the EU average. A problem of illegal dumpsites is mainly solved, with majority of waste ending on some of the official landfills. However, practice of selective waste collection is very weak (with exception of PET and glass bottles), official landfills in poor condition, with insignificant waste processing capacities. Recently adopted Sustainable Waste Management Act (OG 94/13), with more emphasis on selective collection, clearly defined responsibilities and sanctions, and control |
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<tr>
<td>Environmental Theme</td>
<td>mechanisms, is expected to significantly improve situation, starting from January 1st 2014. The threat of EU penalties in case of failing to fulfill set targets related to waste management (percentage of biodegradables on landfills, etc.) will hopefully add seriousness to the implementation of the new Act. Recent Inspection rulings by which it banned certain practices with waste to number of municipalities (including the capital Zagreb), indicates new this expected new resoluteness. More specifically regarding Medical waste management, it is more precisely defined by Ordinance on medical waste management (OG 72/07). According to the Environmental Protection Agency report on medical waste from 2012, around 2500t of hazardous medical waste is reported annually to the official Register of Environmental Polluters. According to findings of Croatian Environmental Inspection, based on comprehensive series of inspections implemented in period 2008-2010 (and most probably continued later, however there are no official reports available), which covered all medical facilities within the public healthcare system, as well as all major from private sector, medical waste management system is relatively well established within all larger medical facilities in Croatia. The term “larger” is not here used in sense of definition given in Ordinance where every source generating more than 200kg of hazardous medical waste is considered a “large sources”, as many smaller sources such as private dental medicine clinics, in reality generates over 200kg of medical waste, mostly because of the poor selective collection practice. The Inspection’s assessment was confirmed in interview with representative of the company authorized for the waste management (collection, processing and disposal), which however emphasized that situation is much worse with smaller, private medical facilities – “small sources” in the Ordinance’s terminology – that are often only formally fulfilling their legal obligation (signing contract for medical waste removal with authorized company), however, in order to pay less, they report only a smaller (often even order of magnitude smaller than what would be normally expected) portion of the total waste quantity, while the remaining part they dispose as municipal solid waste. The problem with them is that because they are small and many they cannot be all supervised by the Inspection as the larger facilities, while impact can be significant, as “small times many” is not so small anymore. The other area in which Environmental Inspection identified irregularities is processing and final disposal of the medical waste, in a sense that the waste is not processed in a way that makes it harmless before its final disposal on landfills. Several authorized companies recently loosed their licenses, due to found irregularities.</td>
</tr>
<tr>
<td>Radiological safety within the medical facility and radioactive waste</td>
<td>Preparation and implementation of projects improving radiation safety with the medical facilities should be considered as <strong>candidate measures based on B and C criteria</strong> According to the assessment of the Croatian State Office for Radiological and Nuclear Safety, the current level of radiological safety within the medical facility is not satisfactory, neither from the point of the quality of provided healthcare service in a sense of maximization of benefits from the therapy while minimizing harmful effects of the radiation, nor from the point of environmental safety and occupational safety of the medical staff. Measures required for improvement of the situation includes acquirement of missing equipment, modernization of the obsolete equipment, education and training of the staff, preparation of the Standard Operational Procedures guaranteeing maximum level of radiation safety. In order to make it eligible for co-financing from EU funds, improvement of radiation safety within the medical facilities should be included in relevant Operational Programs for period 2014-2020. The situation with the radioactive waste – i.e. sources of ionizing radiation from medical facilities which are not anymore actively used – is much better, in a sense that the itinerary of such items are carefully monitored and controlled, and level of compliance within the system is high. The problem is the Croatia has not operative central depot for permanent disposal of radioactive waste, but this problem is out of the scope of the healthcare system reform.</td>
</tr>
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### III. Themes related to Environmental Health area

<p>| Inspection tasks under the Sanitary inspection jurisdiction (some aspects of food safety. | The priority is to secure sufficient capacity of the Sanitary Inspection for implementation of all requirements of the relevant EU legislation (<strong>not yet, but potentially candidate measure based on B criteria</strong>) In all of the listed areas, Croatian legislation has been fully harmonized with EU relevant legislation. As |</p>
<table>
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<tr>
<th>ENVIRONMENTAL THEME</th>
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<tr>
<td>common use items safety, chemical safety, safety related to biocides and other toxic materials, protection from noise pollution, and from nonionizing radiation</td>
<td>in majority of the area, the responsibility is shifted more on Ministry of health successfully established supportive framework. A low occurrence of accidental events in listed areas indicates effective functioning of the system, including the Sanitary inspection. A lasting challenge remains covering of wide (recently even somewhat increased due to EU membership) scope and variety of tasks and responsibilities with limited number of inspectors (which is already below the standard prescribed by the Law (OG 113/08) of 1 inspector per 15000 inhabitants.</td>
</tr>
<tr>
<td>General area of environmental health</td>
<td>Establishment of the permanent Environmental Health program, as one of the Ministries prevention programs, should be considered as candidate measure <strong>based on C criteria</strong>. Ministry of health is the leading government administration responsible for the environmental health (in line with articles 5, 8, 100 of the HEALTH CARE ACT OG 150/08 (which is the only legislation covering explicitly area of environmental health), however, jurisdiction over the subject has been transferred also to several other ministries (environment, agriculture, water management). The priority measures securing protection of the population from harmful environmental factors with acute consequences (food, water, air, ... safety) have been effectively implemented. More advanced, long-term systematic monitoring and analysis of health consequences of combined, lower intensity environmental factors exist only within sporadic projects, due to lack of financing and abundance of other more acute problems on the agenda of relevant ministries. Better cooperation of the relevant authorities, as well as better organization of already implemented activities is the priority measure in the area, in order to use significant existing resources in more efficient and effective way.</td>
</tr>
<tr>
<td>Environmental health laboratory services</td>
<td>Reorganization of the system that would result with higher efficiency should be considered as candidate measure <strong>based on C criteria</strong>. These include laboratory services in areas of water, soil and air quality, food safety, common use items safety, safety related to hazardous chemicals, biocides and other toxic materials, protection from noise pollution. Existing system is effective, but inefficient (average number of services provided per employee is much below averages in EU). The main challenge is the system reorganization, modernization and rationalization in the context of shared authority over the system (between the national and regional levels of government).</td>
</tr>
</tbody>
</table>

As it would be unrealistic to expect inclusion of all the candidate measures into the Program, and as the detailed elaboration of all the candidate measures identified in the Table 5 is far beyond the scope of the ESSA, the focus of the Environmental Systems Assessment – after the initial screening phases – has be narrowed down on a group of themes that were assessed as the highest priority themes. These include:

1. Energy efficiency;
2. Medical waste management;
3. Radiological safety within the medical facilities and radioactive waste;
4. The areas under the jurisdiction of the Sanitary inspection, including: chemicals and biocides safety, environmental noise protection and protection from nonionizing radiation
5. Environmental Health & EH Laboratory Services

Only these themes – i.e. their problem context and relevant management systems – were further analyzed and elaborated in the following chapters. Nevertheless, the final recommendations kept on mind the wider picture that includes all the candidate measures identified within the Screening phase of the assessment.
1.3.2 SOCIAL IMPACTS SCREENING

The Program associated potential social impacts identified through the screening exercise can be structured around the four main themes.

THE FIRST ONE is related to the challenges of the significant organizational changes and likely internal and external resistances to these changes. Namely, the Program foresees system changes and upgrades in both the system’s organization (primarily reorganization of the health facility network aiming for higher efficiency and quality of services for patients) and the ways in which the health care services are provided (e.g. quality monitoring and control, defined care path protocols and procedures, centralized procurement). Therefore, the main aim of these changes is higher overall quality for the patients and better organized and managed system for the employees. Although all these changes are overall in favor of both, patients and the employees within the system, they always have opposition, as overall improvements often come at the cost of some objective local loses. Negative perception and reactions could pose a major risk. Also rightsizing/rationalizing of the hospital capacity or health facility network and the health facility network foreseen in the Program could be perceived by interested public as reduction of their rights in the sense of decreased accessibility of health services in the region (county) where rationalization will happen.

THE SECOND GROUP of potential social impacts are related to social inclusion and equity in access to the health care services. The Social Protection and Social Inclusion in Croatia Final Report for The European Commission (2006) reported that Significant inequalities on the basis of socio-economic status exist in Croatia with studies showing that low income groups use significantly less specialist services than higher income groups when health status is held constant. Equity issues are also raised by the growth in out of pocket payments which are disproportionately paid by lower income groups. In addition, privatization of some services has introduced a two tier system. Main groups at risk in terms of low access to quality health services are: those on a low income, the unemployed, large families, the elderly and people living in remote areas (including coastal areas and islands).

National Health Care Strategy 2012-2020 is addressing the issues of some vulnerable groups and their problems: “the greatest contribution to the disease burden of the elderly people are chronic diseases. The most common diseases in elderly people are hypertension, intervertebral disc disease and other dorsopathy, heart disease, acute infections of upper respiratory systems, and diabetes. Share of hospitalized people at the age of 65 and over amounts to 30% of the total number of people treated at hospitals in Croatia. Also there are more than 519,000 persons with disability in Croatia, which is about 12% of the total population. The most common conditions causing disability are impairments of the locomotor system, mental disorders, impairments of other organs and body systems and impairments of central nervous system. Available data on health of Croatian war veterans show that the most common causes of hospitalization in the inpatient wards at hospitals, according to groups of diseases of the veterans and their family members, were mental disorders (76.6%). There is a total of 61,594 Croatian war veterans from the Homeland War, obtaining their status based on wounding, injuries or diseases. There are no routine health care and statistical research on the condition and health care of Roma, therefore the estimates are given based on individual field research. Data on infant mortality in Roma, though incomplete, show great differences when compared to non-Roma population, and the mortality rate in Roma is 3-4 times higher than in the non-Roma population.”
Any reform or activity designed to change conditions for listed groups or selected problems could have negative impact and be recognized as negative. However, the main goal of the Strategy and the Program is to change existing inequalities and inequities in health. Program activities, primarily planned rationalization of the health facility network, are designed to create new resource allocation in health care. These changes will not increase but decrease regional disparities in accessibility of health services for targeted groups (certain professionals, diagnostic procedures, therapies, etc.). Also, it is not expected for these changes to deepen the existing inequalities in health status outcomes between different income levels groups (large gaps between the richest and the poorest groups).

**THE THIRD** are issues related to social accountability of the health care system, both in implementation of the foreseen reforms and in the functioning of the reformed system. Further improvements in transparency at the high-level decision making in the health care system are needed, though some initiatives to that effect are already underway. For example, the new Regulation introduced in 2009 has improved transparency, timeliness and methodology of decision making by the CHIF’s Committee for Medicines. Since 2010, patients’ representatives are members of county health councils. Since 2012, some positive changes have been implemented: participatory approach has been applied in the preparation and development of the National Health Strategy 2012-2020 with a series of consultations meetings and public debates held country wide. Also some potential negative impacts of the Program could be communicated, discussed or mitigated during regular weekly meetings that are being held between various patients’ associations and Minister of Health. Additionally, the website of the Ministry of Health is a good example of transparency with all relevant health information posted and communicated to the public.

**THE FORTH GROUP** of potential social impacts of the Program supported reforms could relate to the impact on the employees – medical and non-medical staff within the reformed system. These primarily relate to the long term plans for outsourcing of non-medical services and impacts caused by reorganization of the health facility network Human resources planning is limited despite Croatia’s facing problems with medical professionals, such as shortage of medical doctors and oversupply of some other types of health professionals. In recognition of the unfavorable human resources trends, the National Health Strategy 2012-2020, stresses the need for strategic planning in the area of human resources. In 2013, a consulting team was contracted by the Ministry of Health to prepare a Strategic Plan for Human Resources Development in Health Care. The work is scheduled to be completed by the end of 2013. The Program activities could further increase regional disparities in job opportunity within the sector between rural and urban areas and different Croatian regions. Program activities, primarily planned rationalization of the health facility network and health services could have negative social effects in terms of potential new professional roles for medical staff. As one of the measures of the Program could be non-medical services outsourcing (e.g. laundry, cleaning services…). These measures could have negative social effects in terms of potential retrenchment /lay-offs of non-medical staff working in non-medical services such as laundry, cleaning.
1.4 Brief consideration of the borrower’s more recent experience relevant for the Program

1.4.1 Recent relevant experience related to the Environmental aspects of the Program

All of the listed key implementing agencies have been involved in a number of projects whose main goal was to build their capacities and prepare them for implementation of the Acquis communautaire. Successful completion of the EU accession, i.e. closure of the relevant negotiation chapter, indicates that capacities have been assessed as sufficient for the task.

The most relevant projects include:

ENERGY EFFICIENCY

- House in order project, implemented since 2009 by UNDP, addressing in very systematic and comprehensive way potential for improvement of Energy efficiency in all public sector buildings (including those in the Health care sector);

MEDICAL WASTE MANAGEMENT, EMISSIONS TO AIR AND WASTE WATER

- Couple of thematic supervision of all public major medical facilities in Croatia by Croatian Environmental Protection Inspection in 2008, 2009, 2010 related to the issue of medical waste management, i.e. to the implementation of a year earlier adopted Ordinance on medical waste management (Official gazette 72/07) (the reference is based on existing official Environmental inspection reports for 2008, 2009 and 2010. The reports for 2011 and 2012 are not publicly available, however – based on remark in the report for 2010, which confirms positive trends, but also concludes that regular inspections are necessary, because there are still irregularities, and inspection audit had proven as efficient method for their correction – thematic supervision most probably continued also in 2011 and 2012);

RADIOLOGICAL SAFETY

- Ongoing IPA 2008 project “Health Protection in Relation to Medical Exposure” implemented by State Office for Radiological and Nuclear Safety in partnership with 12 hospitals (including 4 out of 5 clinical hospital centers)
- Ongoing comprehensive supervision of nuclear medicine departments in Croatian hospitals implemented by State Office for Radiological and Nuclear Safety with objective to assess the current practices and equipment related to the radiological safety and identify critical weaknesses and needs.
- IPA 2011 project “Upgrading of the systems for on- and off-line monitoring of radioactivity into the environment in Croatia”

SANITARY INSPECTION

- CARDS 2002 Strengthening Sanitary Inspection (completed in 2006),
- PHARE 2006 - Developing capacity in implementation and enforcement of environmental law through ECENA and IMPEL project (ongoing up to November 2009);
- IPA 2007 “Chemical Safety – Strengthening Legal Framework of Institutional Infrastructure for protection from Dangerous Chemicals” (September 2010- September 2012);
- Ongoing (2012 – 2014) IPA ECHA project dealing with establishment of “help-desk” which is stipulated as obligation of the responsible authority by REACH and CLP Regulations
- IPA 2009 TA for preparation of the National strategy on Environmental Noise Protection (draft Strategy prepared as the result of the project)
ENVIRONMENTAL HEALTH & EH LABORATORY SERVICES

- IPA 2010 project that resulted among other with the Draft proposal of the Strategy for upgrading the environmental health laboratory services for official control and monitoring in Croatia according to the Acquis requirements;

1.4.2 Recent relevant experience related to the Social aspects of the Program

The key objectives of the health system for the period after 2013 can be found in the National Health Development Strategy 2012-2020 (Box 1.).

Box 1. Objectives, goals of the National Health Development Strategy 2012-2020

<table>
<thead>
<tr>
<th>Strategic objectives:</th>
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<tbody>
<tr>
<td>1) Prolong life expectancy;</td>
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<td>2) Improve quality of life; and</td>
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<tr>
<td>3) Reduce differences in health and health care.</td>
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<table>
<thead>
<tr>
<th>Strategic goals:</th>
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<tr>
<td>1) Improvement of connectivity and continuity in health care;</td>
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<tr>
<td>2) Equalization and improvement of health care;</td>
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<tr>
<td>3) Improving efficiency and effectiveness of the health care system;</td>
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<tr>
<td>4) Increasing availability of health care; and</td>
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<tr>
<td>5) Improving health indicators.</td>
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</tbody>
</table>

The following reform initiatives have been taken with the aim of achieving the objectives stated in the National Health Development Strategy 2012-2020. (Box 2.)

Box 2. Initiatives related to National Health Development Strategy 2012-2020 priorities

<table>
<thead>
<tr>
<th>Priorities/Initiatives</th>
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<tbody>
<tr>
<td>1) Informatization of health care and development of e-health</td>
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<tr>
<td>- Integration of the e-registries in health care, e-record, e-waiting lists,</td>
</tr>
<tr>
<td>2) Strengthening of human resources in health care and their better use</td>
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<tr>
<td>-Strategy on workforce in health care</td>
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<tr>
<td>3) Strengthening of management capacities in health care</td>
</tr>
<tr>
<td>-Business process improvement in Croatian Health Insurance Fund</td>
</tr>
<tr>
<td>4) Reorganization of the structure and activities of health care institutions</td>
</tr>
<tr>
<td>- the internal organization/structure changes of the hospitals, hospital emergency medicine service development</td>
</tr>
<tr>
<td>5) Encouraging quality in health care</td>
</tr>
<tr>
<td>-Hospital accreditation project</td>
</tr>
</tbody>
</table>
6) **Strengthening preventive activities**
   - National screening programs

7) **Preserving financial stability of health care system**
   - Financial consolidation in hospital health care

8) **Intersectoral cooperation**
   - Strategy for palliative care in Croatia
2 Description of Applicable Management Systems

2.1 Relevant Environmental Management Systems

2.1.1 Energy efficiency in healthcare sector
Croatia fully transposed EU directive 2006/32 on energy end-use efficiency and energy services by its End use energy efficiency Act (OG 152/08, 55/12). Besides, in line with the directive / Act’s requirements, Croatia also adopted National energy efficiency program 2008-2016, as well as the First (for period 2008-2010) and Second (for period 2010-2013) Energy efficiency national action plan. The targets set in the Program and Plans are in line with EU target of 20% reduction in used primary energy by 2020. In line with the directive’s requirements (article 14), each Action plan review advance in fulfillment of the set targets, and if necessary, adopts additional measures in order to secure achievement of the targets in 2016 (and later on 2020). The Action plans are submitted, reviewed and cleared by European Commission, which is in charge of fulfillment of the overall EU 2020 target.

The second action plan specifies that the focus in covered period should be on preparation and implementation of the EE projects in buildings, as without these, reaching of the target is highly improbable. Namely, the assessment is that potential for reduction in buildings makes over 50% of the planned total reduction until 2016. In doing this, public sector is expected to lead by example, as was the case in several EE projects that various partners from public sector (practically all Ministries, counties, and number of municipalities, as well as major energy consumers under their jurisdiction) have been implemented in recent period, in cooperation with UNDP and EPEE Fund. The Action plan also includes measures related to development of the Renewable Energy Sources

The national competent authority for the area of energy efficiency is Ministry of economy. Ministry of Construction and Physical Planning plays important role in area of EE measures in building. Important role in co-financing of the EE projects has Environmental Protection and Energy Efficiency Fund. Croatian Real-Estate Agency is designated as the agency which will take over the role of the main coordinator of the EE initiatives in Croatia, especially related to the EE in buildings owned and/or governed by the public sector (i.e. continuation of the House in order project that was implemented by UNDP and all Ministries). The foreseen EE projects in public sector will be financed through ESCO models developed by EPEE Fund, Croatian bank for Reconstruction and Development and interested commercial banks. The EU structural funds will be also used for financing.

2.1.2 Medical waste management
Croatian legislation related to the waste management in general, and medical waste management in particular is fully harmonized with EU legislation. The relevant legislation include: Sustainable Waste Management Act (OG 94/13), and number of By-laws, primarily Ordinance on medical waste management (OG 72/07), while some obligations are specified also by Ordinance on waste management (OG 23/07, 111/07), Ordinance on Register of Environmental Polluters (OG 35/08), and Regulation on categories, types and classification of the waste, with waste catalogue and list of hazardous waste (OG 50/05, 39/09). Relevant strategies and plans include: National Waste management Strategy (OG 130/05) and National Waste Management Plan for period 2007-2015 (OG 85/07, 126/10, 31/11).
The authority responsible for the overall area of waste management in Croatia is Ministry of environmental and nature protection, however, all other levels of government (regional and local) has their responsibilities, as well as legal and physical persons that generate waste. More specifically, related to the medical waste management, all larger sources (>200kg of hazardous medical waste annual) should designate a responsible person within the legal person, while for the small sources (<200kg/year) the responsible person is general manager of the legal person.

Ordinance defines that a legal person is responsible for selective collection of medical waste, record keeping, disposal into suitable containers and temporary storing in appropriate storage space, until it is eventually handed over to the legal person authorized by the Ministry for medical waste collection, processing and disposal.

Environmental Inspection has important supervision authority, over the all mentioned responsible instances within the system.

2.1.3 Radiological safety within the medical facilities and radioactive waste

Croatian legislation related to the Radiological safety within the medical facilities and radioactive waste is in last couple of years fully harmonized with EU legislation. The legislation include: Radiological and Nuclear safety Act (OG 28/10) and number of By-laws including primarily Ordinance on conditions for use of sources of ionizing radiation in medicine and dental medicine (OG 89/13); but also Ordinance on approvals and permits for operation and trading of sources of ionizing radiation (OG 71/12, 89/13); Ordinances on preconditions and protection measures related to operation of sources of ionizing radiation (OG 41/13) and related to operation of electrical devices that generates ionizing radiation (OG 41/13); Ordinance on measuring of the received radiation doses, investigation of the sources of ionizing radiation, conditions for operation and mandatory reports (OG 41/12, 89/13); Regulation on management of radioactive waste, used sealed radioactive sources, and sources of ionizing radiation that are not anymore used (OG 44/08); Ordinance on monitoring of radioactivity in environment (OG 121/13); Ordinance on surveillance and control over the cross-border transport of radioactive waste and used nuclear fuel (OG 11/13); Ordinance on limiting values of received ionizing radiation (OG 59/13); Ordinance on education required for handling of sources of ionizing radiation and application of relevant protection measures (OG 63/11); Ordinance of physical securing of radioactive sources, nuclear materials and objects (OG 38/12).

The responsible authority for the area of Radiological safety within the medical facilities and radioactive waste is State Office for Radiological and Nuclear Safety (Croatian acronym is DZRNS). Its’ tasks include: issuing permits for operation with sources of ionizing radiation; participation in issuing of location permit for premises for sources of ionizing radiation; control of ionizing radiation in environment, food, etc.; keeping of official registers related to sources of ionizing radiation, its operation, legal and physical persons involved, etc; inspection tasks related to the radiological and nuclear safety; preparation of educational plans and programs; informing on accidents with sources of ionizing radiation.

2.1.4 The areas under the jurisdiction of the Sanitary inspection, including: chemicals and biocides safety, environmental noise protection and protection from nonionizing radiation

The legislative framework regulating work of the Sanitary inspection consists of 164 laws and By-laws, including general legislation on Sanitary inspection (Sanitary Inspection Act (OG 113/08, 88/10) and 5 By-laws); Chemicals (19); Biocides (5); Environmental Noise (7); Smoking-reduction/prevention (3); Asbestos (3); Common Use Items (11); Ionizing radiation (29); Nonionizing radiation (5); Protection of
population against infectious diseases (19); Food safety (45); Drinking water quality (2); GMO and novel food (10). Already this numbers indicate complexity of the Inspection’s task in securing public health interest. More specifically, the main pieces of legislation in the subset of the above listed areas which are standardly categorized as part of the ENVIRONMENTAL SECTOR - as indicated by e.g. their inclusion into official State of the Environment Reports, or among the subjects under jurisdiction of the EC DG Environment – include:

- in area of CHEMICALS SAFETY: Chemicals Act (OG 18/13); Biocides Act (OG 63/07, 35/08, 56/10); Acts on implementation of the relevant EU Regulation, including 1272/2008 CLP Regulation on Classification, Labeling and Packaging of substances and mixtures (OG 50/12, 18/13); 1907/2006 REACH Regulation on Registration, Evaluation, Authorisation and restriction of CHemicals (OG 53/08, 18/13); and 689/2008 PIC Regulation on Prior Informed Consent on import and export of chemicals (OG 139/10, 25/13); as well as a number of By-laws including Ordinance on requirements for legal persons authorized for production, trade and use of chemicals (OG 99/13); on Good Laboratory Practice (GLP) (OG 38/08) (and associated National program for supervision of compliance with the Good Laboratory Practice (OG 61/12)); on education and certification for work with chemicals (OG 99/13). There is also National strategy for chemical safety (OG 143/08) prepared in 2008. (Complete list can be found on [http://www.zdravlje.hr/ministarstvo/djelokrug/uprava_za_sanitarnu_inspekciju](http://www.zdravlje.hr/ministarstvo/djelokrug/uprava_za_sanitarnu_inspekciju)). A short transition periods was negotiated for application of REACH and CLP directives for Croatian legal persons producing, trading and using chemicals: one month for registering at ECHA in line with CLP directive; six months for preregistration of chemicals at ECHA for amounts above 1 t/year and twelve months for registration of chemicals at ECHA for amounts above 100t/year, starting from the 1st of July 2013, when Croatia became EU member).

- in area of PROTECTION FROM ENVIRONMENTAL NOISE: Noise protection Act (OG 30/09, 55/13) which fully transposed relevant EU Environmental Noise Directive 2002/49. Same as the Directive, Act requires preparation of the strategic noise maps for areas most exposed to the environmental noise (larger towns with over 100.000 inhabitants, owners and/or concessioners of the major industrial sites, roads, railroads and airports. The map assesses both the levels of environmental noise in the area and number of affected inhabitants. The Act also requires preparation of the action plans with measures to reduce noise in overly exposed areas and prevent worsening of situation by introduction of the new noise sources. The Directive does not set any limit value, however, Croatian legislation includes bylaw on the upper border allowed environmental noise levels in areas where people live and work (OG 145/04, 46/08).

- in area of PROTECTION FROM NONIONIZING RADIATION: Nonionizing radiation protection Act (OG 91/10); Ordinance on protection from EM fields (OG 98/11);

The Directorate for Sanitary Inspection within the Ministry of Health, i.e. its departments dedicated to particular areas, are the responsible authority for almost all above listed areas. The exceptions are food safety, in which Ministry of agriculture has a lead, and Protection of Ionizing radiation, where State office for radiological and nuclear safety has a lead.

The other institutions with important roles in the listed areas include:

- Croatian National Public Health Institute and network of county Public Health Institutes are providing required laboratory services.
- Croatian Institute for Toxicology and Antidoping is the main operative provider of information, advice, education program, certificates on fulfilled education programs in area of chemicals. It provides mandatory education programs for person in charge of chemicals, education in preparation of SDS (Safety Data Sheet) for chemicals, helpdesk on REACH, CLP, CIP requirements. It is also in charge of the central database on chemicals produced, imported/exported, used in Croatia, which collects mandatory data from all legal person dealing with chemicals in Croatia.

- Various legal entities officially authorized by Ministry for official monitoring and analysis

2.1.5 Environmental Health & EH Laboratory Services

The area of Environmental Health has long tradition in Croatia, starting from the pioneering days of one of the founders of the modern area of Public Health, Dr. Andrija Štampar. The legal foundation is laid down already in the Croatian constitution which, under the Article 69, stipulates everyone’s right on healthy life, as well as the State responsibility for securing conditions for healthy environment. The main law regulating the area of Environmental Health or Health ecology is the Health Protection Act (OG 150/08), which in Article 5 explicitly lists all standard activities of the Health ecology as the responsibility of the Republic of Croatia – namely: “measures in area of health protection against harmful factors in environment”, including food, water safety, water and air quality, noise protection, protection from chemicals, ionizing and nonionizing radiation. Articles 8 and 9 stipulate government (national and regional) to finance those measures. Finally, Articles 100 and 101 delegates tasks in the area of Health ecology to the Public Health Institutes.

Currently, there are 22 PHI’s in Croatian: the Croatian Public Health Institute as the central one on the national level; PHI Andrija Štampar in the capital Zagreb, and 20 County PHIs. All of them, except one in Međimurska county and one in Vukovar-Srijem county have established Ecological Health Services as departments specialized for EH tasks and activities.

Beside Public Health Institutes, i.e. their departments/services for Health ecology, important role in the area of Health Ecology have also Croatian Institute for Toxicology and Antidoping, State Office for Radiological and Nuclear Safety, Institute for medical research and occupational health, as well as number of Ministries that have lead role in protection of particular environmental components (including Ministry of Environment protection for air and waste and Ministry of Agriculture for water, food, soil).

Important partner is also Environmental Protection Agency, which is in charge of Croatian Environmental Information System, which also include segment dealing with Environment & Health.

The Health ecology services within the Public Health Institutes have their EH Laboratories.

Croatian Accreditation Agency is authority for accreditation of EL Laboratories according the international norm ISO 17025.

As part of the EU acquis transposition, Croatia also adopted Ordinance on Good Laboratory Practice (OG 38/08) and National program of surveillance of compliance with GLP (OG 61/12) which transposed EU Directives 2004/9/EC and 2004/10/EC. The Ministry of Health is in competent authority for implementation of both Ordinances.
2.2 Relevant Social Management Systems

2.2.1 Task force in charge of the reforms

The Ministry of Health is responsible for health care planning at the central level and is key stakeholder in charge of the reforms. Thus Ministry of Health is responsible for any social issues or consequences related to health or health care system reform.  

The Ministry of Health for many years operates various health care reform projects, mainly governed by task force or working groups. These experiences of task forces and various set of planning/governing procedures or tools enables Ministry to develop and implement new project or programs - as the PforR.

The long-term planning tool of the Ministry is the National Health Strategy. The last Strategy was published at the end of 2012 and is the third document of this sort in the last 15 years. Its planning period (2012-2020) coincides with key strategic documents of the EU and WHO, such as Health 2020. The Strategy is the umbrella document determining the context, vision, priorities, goals and key measures in health care in the planning period. Based on this umbrella document, other planning documents are developed.

The National Health Plan (NHP) is the medium-term planning tool. The latest Plan was published in mid-2012 and contains objectives for the next three years. It contains broad tasks and goals of the health care sector, priority areas and health needs of population groups of special interest. It also sets out actors responsible for its implementation, deadlines and benchmarking criteria. As health needs assessment is not well developed, these objectives are based on basic health monitoring and are defined in function of the existing health care structures. The CNIPH monitors the health needs and proposes objectives for the NHP to the Ministry of Health.

Based on the NHP the Ministry of Health prepares a Plan and Program of Health Care Measures, with a catalogue of health care goods and services that must be delivered to the Croatian population (e.g. measures and activities in the area of prevention, early detection and control of infectious and chronic diseases) aimed at achieving the objectives of the NHP. The latest Plan and Program of Health Care Measures was published in 2006 and a new one is being prepared in 2013. The Plan is based on the suggestions of the CNIPH and the opinions of the competent chambers.

The CHIF uses the NHP and the Plan and Program of Health Care Measures to prepare its annual plans for the provision of health care services. Based on these annual plans, it passes regulations on health insurance entitlements and signs contracts with health care providers. Providers contracted by the CHIF operate within the National Health Care Network. The Network existed from earlier times, it was formally introduced in 1993 according the new legislation in 1993 and is an official planning tool that determines allocation of health care resources between regions (the goal is to ensure equality of access to care for all citizens) according to morbidity, mortality, traffic links and demographic characteristics of their respective populations and is adopted by the Minister of Health.

At the level of counties and the city of Zagreb, County Public Health Institutes collect health statistics and participate in the formulation and implementation of county health programs for their respective areas. These programs were introduced by the “Healthy Counties” Project. They represent local health priorities but also have to be compatible with the NHP.

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1 Ministry of youth and social policy is responsible for providing social welfare services, but social impact related to the health or health care are mainly responsibility of the Ministry of health.
2.2.2 Current practices, legal and institutional framework securing equity in access to health care services

There are several other acts which regulate the work of the health care professionals and health services. The Health Care Act regulates the principles of health care organization, the rights and obligations of health care users, types and responsibilities of health care institutions (at various levels of care) and establishes the principles of monitoring of health care institutions. The Law on Compulsory Health Insurance regulates the scope of the right to health care and other rights and obligations of persons insured under the MHI scheme, supervision, financing, organization, and tasks of the CHIF and the conclusion of contracts between the CHIF and health care providers and suppliers of medical goods. The rights of patients are comprehensively regulated in the Patient’s Rights Protection Act.

The National Health Care Network is the official planning tool that determines allocation of health care resources (financial and other, such as infrastructure and human resources) between counties. The allocation of resources takes into account parameters such as morbidity, mortality, traffic links and demographic characteristics of their respective populations and it is renewed every two to five years.

Croatia’s social health insurance system is based on the principles of solidarity and reciprocity, with the citizens expected to contribute according to their ability to pay and receiving basic health care services according to their needs. There is one insurer in the mandatory health insurance (MHI) system, the Croatian Health Insurance Fund (CHIF).

Health is influenced by policy decisions in a wide range of sectors. The importance of intersectoral cooperation in the area of health is emphasized in the National Health Strategy 2012-2020, which includes „cooperation with other sectors and the society in general as one of its priorities. Following the European strategy Health 2020, the National Health Strategy advocates the „health in all policies“ approach, „whole-of-government“ approach and „whole-of-society“ approach and enumerates examples of the existing and possible forms of cooperation which should be strengthened and coordinated. Health is taken into account in both the decision making process and policy implementation. In any regular decision making process at the central level, intersectoral cooperation between the Ministries, including the Ministry of Health, must be assured. The need for intersectoral cooperation in the implementation of legal acts is often explicitly stated in the legal act themselves. Intersectoral cooperation between various actors (such as Ministries, agencies, institutes, schools, NGOs, civil society organizations, media, etc.) is also taken into account [in the implementation of a number of national strategies and programs, for example, the National Strategy of Protection Against Family Violence (2011-2016), the National Program for Occupational Health and Safety 2009-2013, the National Mental Health Strategy 2011-2016, the National Strategy against Disorders caused by Excessive Consumption of Alcohol 2011-2016, and the National Strategy and Action Plan against Narcotic Drug Abuse, and initiatives at the county level, such as the “Healthy counties” project.

2.2.3 Current practices, legal and institutional framework securing social accountability of the Croatian health care service

2.2.3.1 Participatory Approach Applied

Drafting the Strategy 2012-2020 was based on a partnership approach, and was organised in such a manner to include as wide as possible a circle of interested experts and general public. The expert and public consultations (including workshops with committees) were organized with aim to collect and process the results of such consultations, and prepare the draft of the Strategy and its final version. The
committees consisted of experts from various institutions, societies and organizations in the health care system. Through the workshops and by consulting with the Coordination Board, the committees helped identifying the priority problems in health care and the possibilities of influencing the problems, and they were organized in such a manner that each of them observed the entire health care system, but from different perspectives. That was the attempt to achieve a holistic approach to thinking about the problems and strategic planning in the health care system.

2.2.3.2 Patients' Associations and Patients’ Rights
The first association for patients’ rights in Croatia, the Croatian Association for Patients’ Rights, was founded in 1999 and since then a large number of other NGOs included the issue of protection of patients’ rights in their programs. They actively participate in the decision making process by participating in public debates, but their formal influence is limited. In addition, patients are represented in the County Commissions for the Protection of Patients’ Rights. Patients’ representatives are also members of the governing board of the CHIF and of the county health councils. In order to enhance public participation and improve patients' satisfaction, in 2012 Minister of Health introduced regular meetings with patients associations' representatives. As of January 2012, representatives of different associations meet once a week with the Minister and discuss patients' problems and obstacles encountered while realizing their right to health care.

2.2.3.3 Capacity Building
Process of change caused by decentralization was seen as an excellent opportunity for improving Public Health practices in Croatia at the County level. A »learning-by-doing« training approach appeared to be the best tool for public health capacity building and strengthening of collaboration between health policy stakeholders at the county level in order to both build knowledge and skills. Based on Healthy Plan-it™ program (developed by Centers for Disease Control and Prevention, USA) for identifying and prioritizing healthcare needs and developing plans for addressing them, and other materials, the faculty members tailored a public health capacity building »Health – Plan for it« program proposal for Croatia. The program’s aim was to provide guidance and assistance to counties, while introducing more effective and efficient public health policies and practice. By the end of 2010 all counties and city of Zagreb joined to the program and developed their own public health priority programs based on this “bottom-up” program.

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2 Following the provisions of the 2004 Act, commissions for the Protection of Patients’ Rights have been founded at both the county (in every county) and national level (at the Ministry of Health). The five-member County Commissions, with representatives of patients, NGOs and experts in the field of the protection of patients’ rights, monitor violations of individual patients’ rights and propose measures to protect and promote patients’ rights in the area of the county, inform the Ministry of Health Commission of cases of serious violations of patients’ rights and submit annual reports on its work to the County Assembly. The seven-member Ministry of Health Commission (three representatives of associations working to protect patients’ rights, one representative of the media, three representatives of the Ministry of Health) monitors the implementation of the realization of patients’ rights pursuant to this Act, has oversight over the County Commissions, and promotes patients’ rights in Croatia, including via cooperation with international bodies.

3 Local planning and patients’ accountability is addressed precisely in the chapter 10 of the Act on health care from 2009: In order to realize its rights, obligations, tasks and objectives in the area of healthcare on its territory, a unit of district (regional) self-government shall establish a health council. The composition of the health council shall ensure the participation of representatives of local self-government, healthcare industry chambers, professional associations, associations for the protection of patients’ rights and the trade-unions and employers in the healthcare industry in the process of planning and evaluating the healthcare provided on the territory of the unit of district (regional) self-government. In order to realize the tasks stipulated in Par. 3 of this Article, the health council shall give its opinion on the draft plan of healthcare for the area of a unit of district (regional) self-government and shall propose measures to ensure the accessibility and quality of healthcare in the unit of regional (regional) self-government.
2.2.3.4 Grievance Mechanism

A patient who considers that one of his/her rights established by the 2004 Act has been violated may make a verbal or written complaint to the head of the health care institution in which the alleged violation took place. If the head of the health facility does not inform the patient within eight days of measures that have been taken relating to his/her complaint, or if he/she is not satisfied with the measures taken, the patient has the right to submit a complaint to the competent County Commission. This Commission is obliged to inform the patient, within a maximum of 15 days, of all measures taken in relation to his/her complaint. The County Commission has the right of access to health care facilities and examine if the rights of patients are observed. The Commission is obliged to write a report on the inspection it undertakes and must send it to the competent inspector (health or sanitary), within no more than 8 days, or to the body responsible for inspection of the work of health workers, that is the bodies of individual professional chambers. These bodies are obliged to report to the Commission within 30 days of receiving the report, and in urgent cases without delay, on the measures undertaken. If the competent body (inspectors or a chamber) has reason to suspect that a petty or criminal offence has been committed, it is obliged to submit a petty offence or criminal complaint within 30 days from the completion of the inspection and inform the Commission of the outcome of the procedure. The latter has 8 days to inform the patient.

Patients who are not satisfied with the measures taken to protect their rights, can seek their rights from a relevant professional chamber, the Minister of Health (via e-mail or on the phone), or a competent court, which may award financial compensation (the burden of proof lies on the side of the patient). Also the Ministry of Health introduced a free telephone service „White Phone“ which enables patients to report their complaints on health workers or any other complaint in relation to realizing their right to health care. After receiving the complaint, the Ministry informs the patients on the necessary measures and the solution immediately or in writing if it is not possible to resolve the issue immediately.4

2.2.4 Current practices, legal and institutional framework securing employees’ rights within the Croatian health care service

There are several legal sources for regulating potential retrenchment /lay-offs of the medical or non-medical staff. At the national level, the legal sources are: (i) the Labor Act - the obligation to care for workers after or during the employment termination; (ii) collective agreements - the obligation to provide support and severance pay regulated in collective agreements; and (iii) combination of the above mentioned legal sources or some other specific measures/ program developed for specific workforce group

The severance pay scheme, the right to severance pay is regulated in the Labor Act in Title "Termination of Employment Contracts" 5

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4 Existing grievance channels are used by Croatian patients to make their cases voiced and addressed. On average, around 900 complaints are received monthly, out of which 1/4 are complaints related to unprofessional behavior of the medical staff (long waiting, unkindness, inability to get information); 1/3 are related to issues with the health insurance; 10% are related to waiting lists and e-appointments for various medical treatments; while the rest are questions related to administrative issues (addresses, working hours, contacts in various medical institutions). Complaints related to wrong medical treatment are relatively rare.

5 Analysis of the Severance Pay Scheme in the Republic of Croatia: current arrangements and changes to be considered / World Bank report prepared at the request of the Ministry of Labor and Pension System of the Republic of Croatia

Severance pay, as regulated by the Labor Act, if the worker has been in an uninterrupted employment relationship with the same employer for longer than two years, is calculated as the amount of one third of the salary for each complete year of employment with that employer, and no more than six salaries, but may also be regulated more favorably by a collective agreement, work regulation or an individual employment contract. Mainly these more favorable amounts relate to workers in the public sector.
# 3 Program Capacity and Performance Assessment

## 3.1 Environmental management system assessment

### 3.1.1 Energy efficiency in healthcare sector

The assessment is based on findings and results of the recently completed EE project *House in order* that the Ministry has been implementing since 2009 in cooperation with UNDP Croatia.

The first of the project’s activities and results was established monitoring and information system on EE in majority of medical facilities under the Ministry’s jurisdiction (the similar has been done for all the other Ministries).

The analysis of the collected data – which is quite representative sample including around 80% of the total capacities, including all major hospitals (clinical hospital centers, clinical hospital, clinics), majority of special hospitals and some County hospitals – has shown very poor average energy efficiency of the Croatian healthcare facilities (average energy consumption is 630kWh/m², which is more than double relative to European leaders in healthcare sector energy efficiency, such as Switzerland and Sweden.

Based on the 2011’ data, energy spending within the healthcare system makes around 3% of the total budget. In absolute terms, it was 450 million HRK in 2011 (due mainly to increased cost of energy, the amount more than doubled since the year 2000 – i.e., it was 210mil HRK in 2000., 300mil HRK in 2006; 352 in 2009, 405 in 2010). The opportunity to save couple of hundreds millions HRK – i.e. 30-50% savings on total amount of 400 million HRK – would be clearly significant economic co-benefit of the implemented EE measures in the Croatian healthcare sector.

Beside establishment of the information system which continuously collects data for approximately 80% of the health facility network (altogether 750,000m² of developed building surface; 327 objects; remote monitoring of the energy and water consumption in 16 hospitals), the project organized various educational programs which involved over 3000 employees of the Ministry of health (!) (2337 employees attended the basic informative WS Green office; 4 employees completed training for the Green office coordinator; 9 employees for Energy Efficiency advisors; 36 training for the person responsible for energy management in the buildings; 155 for responsible persons; 326 for technical personnel; 207 for operation of the established information system on energy management).

As the next step, energy audits were made for approximately ¼ of objects (some of them prepared before adoption of the legislation on Energy audits and certificates for building (OG 05/11, 36/10)), which defined EE measures for these objects.

Finally, project documentation for concrete EE measures have been prepared for three objects (mainly boilers reconstruction – switching from oil to gas, and higher efficiency).

As a conclusion, project House in order established the methodology (audits, education, preparation of project pipeline) and developed initial capacities within the system (initial training of potential heads of EE teams in the Ministry and all major hospitals, prepared initial projects in a project pipeline of EE projects for Croatian health sector). All these present a solid foundation for further development and scaling up of EE activities. However, the system’s capacity to capitalize this opportunity is not yet sufficient.
The main barrier identified during the project implementation was lack of coordination and organization within the system and lack of subordination that would secure that tasks issued by the coordinator (which is natural role of the Ministry) are taken as order and not as an kind request that can be ignored without consequences. The efficient and effective coordination is necessary prerequisite for effective next steps forward, which includes establishment of the central register, procedures for selection and support to priority projects, securing of the TA for their preparation and implementation.

Additional favorable circumstances is that Energy efficiency in buildings is relatively high on the agenda of both Ministry of Economy and Ministry of Physical Planning and Construction, which means that the wider institutional environment will soon also become more supportive for this kind of projects.

3.1.2 Medical waste management

If assessed based on the outcomes, the overall waste management framework in Croatia was both ineffective and inefficient. However, faced with the prospect of possible fines from EC, for not complying with set principles, legislation and targets, there are chances that issue of waste management will finally get attention it deserves, reflected in well-established framework with clearly defined responsibilities and sanctions for non-compliance. Recently adopted Sustainable Waste Management Act (OG 94/13) goes exactly in that direction. Also, recent Inspection’s rulings by which it banned certain practices with waste to number of municipalities (including the capital Zagreb), indicates new resoluteness in supervision of compliance with the waste-related legislation.

More specifically related to the medical waste management, it is example of how systematic prolonged inspection effort can accelerate positive changes within the system. Thanks to the Environmental inspection’s thematic supervision of medical facilities in period 2008-2010, which covered all public sector medical facilities (as well as major private sector facilities), all of them are today operating very much in compliance with all legal requirements. Namely, all facilities in public sector, and majority of those in private sector, have formal contracts with waste management companies authorized by the Ministry of environment. A fair level of selective collection within facilities is secured through established waste management infrastructure for selective collection at the hospital sites.

The situation is much worse with smaller, private medical facilities – “small sources” in the Ordinance’s terminology – that are often only formally fulfilling their legal obligation (signing contract for medical waste removal with authorized company), however, in order to pay less, they report only a smaller (often even order of magnitude smaller than what would be normally expected) portion of the total waste quantity, while the remaining part they dispose as municipal solid waste. The problem with them is that because they are small and many they cannot be all supervised by the Inspection as the larger facilities, while impact can be significant, as “small times many” is not so small anymore.

The other area in which Environmental Inspection identified irregularities is processing and final disposal of the medical waste, in a sense that the waste is not processed in a way that makes it harmless before its final disposal on landfills. Several authorized companies recently loosed their licenses, due to found irregularities, which again demonstrate new resoluteness of the Ministry in supervision of the waste management.

A space remaining for improvement in waste management practices within the medical facilities in the public healthcare network is minimization of generated hazardous medical waste quantities through improved selective waste collection – i.e. prevention of mixing of smaller quantities of hazardous waste with larger quantities of non-hazardous waste. The suggested approach, with effectiveness proven on a number of examples all over the world, is establishment of comprehensive Environmental Management
System as a framework for combination of measures including awareness raising and training of the staff, performance monitoring and control, reporting, improvements in waste collection infrastructure.

3.1.3 Radiological safety within the medical facilities and radioactive waste

The State Office for Radiological and Nuclear safety is well organized and proactive in initiation of a number of projects (see chapter 1.4) systematically supporting improvements of radiological safety in general, and in particular within the medical facilities. Instead of just exercising its inspection role, it is actively involved in awareness raising about the irregularities and theirs consequences, preparation of guidance for the best radiology safety practice in radiology, radiotherapy and nuclear medicine; assistance in acquiring of the equipment needed for higher safety and quality. The State Office has up-to-date and accurate need assessment related to radiological safety in medical facilities. The limiting factor for improvement of the situation is lack of money.

Up to now, radiological safety was not included as an eligible theme in Operative Programs for EU funds, meaning that they could not use EU funds for their important and urgent work. If included in Operative Programs which are currently under preparation, for period 2014-2020, they have already prepared projects waiting for financing.

State Office is also continuously working on the strengthening of its own capacities. In its Strategic Plan for period 2014-2016 it included several well thought capacity building measures, including self-assessment in line with IAEA (International Atomic Energy Agency) methodology, establishment of the QC system in line with ISO 9001 norm, and preparation of various guidelines for more effective and efficient functioning of its employees on their inspection tasks.

3.1.4 The areas under the jurisdiction of the Sanitary inspection, including: chemicals and biocides safety, environmental noise protection and protection from nonionizing radiation

As an overall comment regarding the functioning and capacities of the Sanitary inspection, it can be said that it is functioning well. The first, outcome-based argument is that there are no more significant or frequent accidents that would indicate need to strengthen activities of the sanitary inspection. The second, output based argument is that relevant EC authorities, based on their monitoring of compliance with EU criteria during the accession process, confirmed that Croatia fulfilled its obligations according the Article 4 of the EC Regulation 882/2004 on official controls, which requires competent authority (in this case Sanitary Inspection) “to have / or have at their disposal suitable laboratory capacities for testing and analysis as well as sufficient number of staff with suitable education and experience, in order to be capable to implement official controls and control task effectively and efficiently”.

This said, it should be emphasized that maintaining sufficient capacities should be taken as serious task as a presence of sufficient number of inspectors, well distributed over the territory, with sufficient frequency of control sampling is the key prerequisite for effective preventive functioning of the inspection service, while there are couple of indicators suggesting that the Inspection is working at the limits of capacities of the existing staff. Namely, in some areas (e.g. food safety) the Inspection has already been warned by EC authorities (in this case by Food and Veterinary Office) that the number of staff is barely sufficient, and that strengthening of capacities through new recruitments is strongly suggested. The current number of inspectors in the Inspection (190 regional, 30 national, 30 on the borders) is low even judged against criteria stipulated in the Law on Sanitary inspection, as depending on whether we calculate in only regional inspectors, or all of them, these numbers means that there are one sanitary inspector per 17.000 or
1 per 22,000 inhabitants, while the Law requires 1 inspector per 15,000 inhabitants. The actual situation in some region, related to some specific area can be even more critical than suggested by the average numbers.

The situation calls for even more attention if taken into account that on one side, the list of the tasks got longer after EU accession, due to new EU related tasks and additional EU legal requirements, while on the other, the number of inspector is decreasing due to retirements and current restrictive general government policy regarding the new employments of the public servants.

In short, the capacities are already overstretched and there is a high probability that any further either reduction of staff or increased workload by introduction of additional tasks would result in decreased inspection effectiveness and associated increased risks to public health interest. This assessment was also firmly confirmed by representatives of the Inspection.

Regarding the three more environment-related areas under the inspections jurisdiction – chemical safety, protection from environmental noise, protection from nonionizing radiation – the situation is as follows:

- Ministry of Health prepared well for implementation of REACH Regulation thanks mainly to the IPA 2007 project dealing with Chemical safety, through which the close cooperation with European Chemical Agency was established. As REACH makes industry responsible for assessing and managing the risks posed by chemicals and providing appropriate safety information to their users, the main task of the Ministry remains provision of the support to the industry in implementation of the REACH requirements. More specifically, in line with the obligations from the Act on implementation of the REACH Regulation, the Ministry has established a Helpdesk for chemicals producers, importers, exporters, users and general interested public (helpdesk-reach@miz.hr; http://echa.europa.eu/croatia). Ministry also translated ECHA published FAQ on REACH, and provided direct link to ECHA helpdesk (http://echa.europa.eu/reach/helpdesk/echahelp_en.asp). In addition to the helpdesk, Ministry cooperates with ECHA and EC Joint Research Centre in organization of various WS (e.g. recently organized WS on implementation of PIC directive, in cooperation with Croatian Chamber of Commerce and EC JRC), Croatian Institute for toxicology and antidoping is also very active and competent in its operative role, providing direct advices and relevant training to industry.

- The Noise protection Act is being increasingly implemented. According to the Croatian Environmental Protection Agency, only 4% of noise maps was prepared in 2007, while in 2012 two out of the four towns in Croatia with more than 100,000 inhabitants prepared maps, as well as concessionaire for one recently constructed highway. In addition to that, noise maps have been also prepared for 15 municipalities with less than 100,000 inhabitants, which were not legally required to do so. The fact that they did arguably suggests that: 1) environmental noise is a real problem in many areas (most commonly along the major roads passing through urban centers, or in residence areas situated next to traditional industrial zone); 2) the approach proposed by the Act has been recognized and accepted as a systematic way to deal with it. Standard noise protection measures such as setting of lower speed limits have not yet become common practice in Croatia, which indicates not absence of the problem, but lack of awareness among the population of possibility for its solving. The relevant legislation has some weaknesses that prevent effective Inspection work (e.g. the noise from visitors is not calculated when measuring noise from a club).

- The department successfully handles all the tasks under its jurisdiction. The most frequent complaints from the citizens are related to antennas for mobile network. Following precautionary principle and in
order to compensate for the fact that there are three mobile network operating in Croatia, the adopted By-laws orders at least twice stricter limiting values for EM radiation than requested by EU standards. More related to the Healthcare sector, the department is issuing permits for healthcare institutions doing exams of the personnel working with sources of ionizing radiation (10 in 2013); as well as permits for use of laser in healthcare (80 in 2013).

3.1.5 Environmental Health & EH Laboratory Services

Although the Health protection Act lists as a duties of Public Health Institutes the main portion of the standard EH tasks – i.e. implementation of the health policies and environment protection policies … through monitoring, control, analysis, assessment of health impacts of environmental factors … recommendation and participation in implementation of measures preventing their harmful effects – in practice, its operations is much narrower. Namely, as there is no dedicated budget line for the Environmental Health programs, the Health Ecology Services is financed solely by selling their services on the market. This in turn directed the Service development to more narrow area for which market exists, which is the area of EH laboratory services (both for various inspections and for industries), while longer term, more comprehensive monitoring and analysis program, research and intervention programs practically do not exist.

Health Ecology Service is well developed over all Croatian territory, as practically all (18 out of 20) Counties’ Public Health Institutes have established Service and EH laboratory. However, the developed capacities – from 7 Services in 1990 to nowadays 18 Services – are much too high for the current needs, which make existing system highly inefficient, as indicated by annual numbers of various laboratory exams per employee, which is much below the EU average. Such development was (and still is) consequence of insufficient of even non-existing coordination between different levels of government (i.e. each County is autonomous in its planning) and various sectors that requires similar type of laboratory services (Sanitary inspection, i.e. Ministry of Health; but also Ministry of Environment, Ministry of agriculture, etc).

Accrediting of the laboratories according to ISO 17025 set of norms started in 2003. Currently, practically all laboratories have at least some analytical method accredited, as this is legal prerequisite for all official controls.

No laboratory has yet been accredited as compliant with the Good Laboratory Practice, in a sense of Directive 2004/10/EC. However, it will not be obstacle in implementation of REACH regulation, because laboratory tests are required only as part of the registration of new substances and no Croatian legal person dealing with chemicals has such needs.

3.2 Social management system assessment

3.2.1 Capacity of the task force in charge of the reforms

The National Health Care Strategy (NHCS) 2012-2020 has addressed the following:
- Lack of understanding and rejecting the need for reform measures in the Croatian society.
- Undermined trust in public sector institutions as a result of perceived corruption.
- Regionally uneven economic strength and ability to finance health care.

There are very limited data and researches on the policy process of health care reforms in Croatia. Moreover, there is also no systematic evaluation of the reform outcomes. However, in the last few years
through the Bank’s supported projects, the development of strategic planning at the Ministry of Health was initiated. Inter alia, this includes the development of a hospital master plan, health human resources strategy and specific projects in the area of information and communication technology (ICT) aimed at improving the management of the health system and delivery of health services.

Furthermore, according to the 2012 Euro Health Consumer Index Croatia’s score in the category “health outcomes” (measured by infant deaths, cancer deaths relative to incidence, preventable years of life lost, MRSA infections, caesarean sections, undiagnosed diabetes, and depression) was at par with Germany and the UK and higher than 16 other countries. In terms of prevention and the range and reach of services provided, Croatia’s score was at par with Malta and higher than 21 other countries (Health Consumer Powerhouse, 2012). The results of Euro Health Consumer Index confirm capacity of Croatian health care workforce for modern and effective health care.

3.2.2 Current challenges in securing equity in access to health care services

The National Health Care Strategy 2012-2020 addresses the equity in access to funds for maintaining or improving health, fairness in distribution of such funds and solidarity among social groups and generations as Fundamental values and principles.

As the health is the fundamental value of the Croatian health care system, the health care system has a task “to provide the constitutional right of every citizen to health care. When organizing the health care system, it is necessary to adhere to fundamental principles pursuant to which every person is entitled to health care and the possibility of achieving the highest possible level of health, in accordance with the provisions of the Health Care Act and the Mandatory Health Insurance Act.”

Some constrains in securing equity in access to health care services could appear as in the Strategy 2012-2020 with two important weaknesses recognized: health needs assessment is not properly developed in Croatia and human resources planning is limited.

However, the Strategy clearly sets the “Strengthening and better use of human resources in health care” as its Priority 2. The development of a Strategic plan of human resources is based on the rationale that the Healthcare workers are the biggest and the most important resource in the Croatian health care system. As underlined in the Strategy, without a sufficient number of satisfied, protected and properly engaged health care workers it is not possible to achieve appropriate health care of the Croatian population.

3.2.3 Assessment of the current practices in securing social accountability of the Croatian health care service

The Strategy envisions the health care system in the Republic of Croatia which “will, in an efficient and rational manner, implement the measures of health protection and improvement, as well as treatment and rehabilitation of patients, always governed by scientifically based findings. The system will give patients central and active role, and it will be driven by high ethical and moral standards.” First step toward this vision are Broad Consultations Achieved in the Preparation and Development of the Strategy. Although there is no central website or other source that provides general health system information for the patients, but websites and help lines of the Ministry of Health, the CHIF and the majority of hospitals or other health care institutions provide key information related to publicly-funded health care services and rights, including and some technical information, such as information on waiting times and available treatments. This information has significantly improved the quality of health care, especially after introduction of e-

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6 compares 34 European health care systems
Waiting lists and e-ordering. The on-line system does not yet provide comparative information on the providers, however, the new contracting model is focused on monitoring KPI's and QI's. Hence, we can expect more information on comparisons between providers, followed by user experience, in the near future. Existing models do not provide effective patient or civil society participation in the policy development processes, but there are many positive examples that have to be followed.

Positive example is the approach and the entire methodology used for the preparation and development of the Health Care Strategy 2012-2020 which included professionals and general public. The initial data collection and analyses were conducted by the Coordination Committee, with the help of associates from Croatian National Institute of Public Health and other institutions. Each of the Committees identified the priority problems at a separate Committees were joined by other representatives of key participants in health care in order to discuss strategic issues. Based on the collected data and partnership consultations, a SWOT analysis was drawn up, strategic problems of the Croatian health care system were identified and strategic development directions, priorities and measures were suggested. The final product of the described process was the draft of the Strategy, a document that served as basis for public discussion, and which was officially initiated at the course “Media and Health” on 28 June 2012 in Grožnjan. Formal opinion on the draft of the Strategy was requested from the key participants in the health care system, and the entire public was invited to comment on the content of the document. After the public discussion about the draft of the Strategy, the collected comments and objections were analyzed and they were taken into consideration when drawing up the final version of the Strategy.

Other positive examples are several changes in counties’ health policies and practices that could be attributed to the “Healthy Counties” project which successfully engaged stakeholders from political, executive, and technical arena. It has involved variety of community groups (youth, elderly, unemployed, farmers, islanders, urban families, etc.), local politicians, and institutions in the needs assessment, prioritizing and planning for health cycle. County Health Plans are accepted politically (by County councils), professionally and publicly. Proposed interventions, for health improvements, rest on local organizational and human resources and are (in the moment in five Counties) financially supported by the County budgets. Assessment of the current practices in securing employees’ rights within the Croatian health care service

Human resources issues are strongly related to sustainable financing of Croatian health care system, as exemplified in the fact that healthcare workers’ salaries are the primary cost driver in Croatian hospitals. Also, Croatia’s accession to the EU in 2013 is posing significant new challenges to the human resource capacity, as it is expected that part of the workforce will move to other EU countries. Program activities, primarily planned rationalization of the health facility network and health services could further increases regional disparities in job opportunity within the sector between rural and urban areas and different Croatian regions. More information on this will be available after completion of the Hospital master plan and Human resources strategic plan expected in early 2014. In terms of potential retrenchment /lay-offs of non-medical staff existing legislation will provide equal conditions and rights as for any other workforce group.

According to “Analysis of the Severance Pay Scheme in the Republic of Croatia: current arrangements and changes to be considered” /World Bank report prepared at the request of the Ministry of Labor and Pension System of the Republic of Croatia - September 2013/ “It is important to differentiate three sectors in the analysis of the scheme. The first relates to the public sector, which is well protected by collective agreements and where severance pay is generous. Then there is the system of insurance of protection of claims by workers in the case of bankruptcy, conducted by the Agency for Insurance of Workers' Claims in
the Case of the Bankruptcy of the Employer. The third part is the most comprehensive, relating to workers in the private sector, whose rights to severance pay are regulated by the general provisions of the Labor Act, or individual’’
4 Suggested areas of improvement and inputs to the Program
Action Plan

4.1 Environmental aspects related suggestions for improvement

4.1.1 Measures strongly recommended for inclusion in the Program

4.1.1.1 Establishment and implementation of Program for improvement of Energy efficiency in
the Healthcare sector

COMPATIBILITY WITH THE PROGRAM FOCUS, THE STRATEGY AND OTHER
NATIONAL DEVELOPMENT GOALS:

- a higher energy efficiency of the premises is fully in line with the Program objectives, as it positively
contributes to all three: efficiency, service quality, financial sustainability.
- preparation of projects improving EE of the healthcare sector satisfies both A and C criteria defined in
the section 1.3.1.3. – i.e. the measure is 1) “greening” of the reorganization / reconstruction /
restructuring projects foreseen by the Program; 2) it will bring significant returns in savings, in
absorption of EU funds, in environmental benefits, on relatively small investments in human
capacities and TA for EE program and projects management and implementation.
- The inclusion of EE measures among the reform’s priorities is stipulated by the National healthcare
strategy 2012-2020. Namely, in SWOT analysis, a low energy efficiency of existing healthcare
infrastructure is recognized as weakness, growing prices of energy as a threat, and processes within
the House in order project, dealing with improvement of EE in health sector (monitoring, information
system, analysis, education, elaboration of EE projects) as a system’s strength. In elaboration of the
Strategic priority 4, which addresses Reorganization and restructuring of the medical facilities, the
Strategy explicitly requires reconstructions of the hospitals to be also directed towards improvement
of EE, which will result in the savings related to the system’s operative costs, while also contributing
to fulfillment of one of the Europe 2020 strategy key goals: 20% increase in EE.
- the wider context and trends are very much in favor of such activity: it contributes to fulfillment of the
ambitious national (and EU) targets in EE; it contributes to better absorption of EU structural funds; it
addresses threat of raising prices of energy.

MEASURE DESCRIPTION: Based on the model established by the House in order project, EE teams
should be established in the Ministry and in the medical facilities. The teams will be formed as a task
group, consisting of the existing employees from services that deal with infrastructure maintenance,
environmental protection and quality control and assurance. Implementation of highly specialized
technical tasks – such as energy audits, preparation of the technical project documentation, and writing of
the applications for EU funds – will be supported by external TA. The teams work should be supervised
and supported by top management. The Ministry’s team will work as the process champion (i.e.
coordinator, motivator, educator and provider of well-targeted TA support), while EE teams in medical
facilities will be in charge of implementation of concrete EE projects and continuous improvement of EE
within their facilities. The team’s concrete tasks / activities include: organization of Energy audits;
identification of EE measures; preparation of the technical documentation for the EE projects; application
for co-financing from EU structural funds (of individual project, or groups of similar projects, if it increase efficiency).

**PREREQUISITES:** A majority of internal prerequisites exists: a staff which is already partially trained, or can be easily trained; best practice example of what should be done demonstrated by the *House in order* project. What is required is decision of the top management and removal of organizational barriers that could hinder effective cooperation between the Ministry on one side, as the process champion (i.e. coordinator and provider of well-targeted TA support) and medical facilities on the other, as implementers of the concrete EE projects.

### 4.1.1.2 Preparation and implementation of projects improving radiological safety within the medical facilities

**COMPATIBILITY WITH THE PROGRAM FOCUS, THE STRATEGY AND OTHER NATIONAL DEVELOPMENT GOALS:**

Preparation and implementation of projects improving radiological safety within the medical facilities satisfies B and C criteria defined in the section 1.3.1.3. – i.e.: 1) achievement of the highest possible radiological safety no doubt deserves status of a “measure addressing environmental issues whose seriousness requires urgent intervention”; 2) relatively small investment would bring significant returns both in the quality of provided healthcare service in a sense of maximization of benefits from diagnostic, interventional procedures and therapy while minimizing harmful effects of the radiation, and in environmental safety and occupational safety of the medical staff.

**MEASURE DESCRIPTION:** Measures required for improvement of the situation includes acquirement of missing equipment, including radiation detection and quality control equipment, modernization of the obsolete equipment, education and training of the staff, preparation of the Standard Operational Procedures guaranteeing maximum level of radiation safety. In order to make it eligible for co-financing from EU funds, improvement of radiation safety within the medical facilities should be included in relevant Operational Programs for period 2014-2020.

**PREREQUISITES:**

- Croatian State Office for Radiation and Nuclear Safety had prepared projects based on the recently completed need assessment in the radiology, radiotherapy and nuclear medicine departments in medical facilities
- In order to secure eligibility for co-financing from EU structural funds, “Improvement of radiation safety within the medical facilities” should be included among objective in relevant Operational Programs for period 2014-2020

### 4.1.2 Measures strongly recommended for inclusion in the next upgrade of the National Health Care Strategy and forthcoming programs supporting its’ implementation

These are measures that do not qualify by the adopted criteria for inclusion into the Program, which are however of critical importance for systematic long term greening of the Healthcare sector in Croatia, which should become one of the objectives in the National Healthcare Strategy.

#### 4.1.2.1 Initiation of the comprehensive long-lasting program dealing with the continuous active greening of the Croatian healthcare sector

As already mentioned in the section 1.3.1.1, the healthcare sector all over the world is more and more recognizing its responsibility for its environmentally sustainability. The World Health Organization in its
recent publication, *Healthy hospitals, healthy planet, healthy people*, recognizes that health sector, as one of the most trusted and respected sections of society and one of the largest employers and consumers, has both a responsibility and an opportunity to play a leading role in ongoing transitions to more environmentally sustainable economies and societies, with significant health, economic and social co-benefits. In many countries this growing environmental awareness has already resulted in initiation of the comprehensive, long-lasting programs with mandate to systematically and continuously work on improvements of environmental performances of their healthcare systems. Some of the examples include:

- **Healthcare Without Harm** international coalition ([www.noharm.org](http://www.noharm.org));
- **Global Green and Healthy Hospitals (GGHH)** international association / network, with over 3500 thousands member hospitals and healthcare systems from all continents;
- **Practice Greenhealth** network in USE, established through common initiative of Environmental Protection Agency and American Hospitals Associations, which since its establishment in 1998 until 2006 engaged over 7.000 medical facilities in USA;
- **Canadian Coalition for Green Healthcare**;
- **Sustainable Development Unit established by the National Health Service (NHS) England** ([www.sdu.nhs.uk](http://www.sdu.nhs.uk)), with mandate to support transformation of NHS England into leading sustainable and low carbon service;
- **Green Hospital Program and Green Hospital Alliance** initiated in Germany.

All of them have on their agenda the themes listed in the section 1.3.1.1, with the main mandate to inform, motivate, educate, engage, support healthcare facilities in their efforts to become more environmentally sustainable.

The ESSA recommendation is to secure efficient and effective integration of the environmental and sustainability considerations into the forthcoming reform of the Croatian healthcare sector through establishment of national program that would follow the example of the above listed programs. This measure would be logical generalization and widening of the already recommended measure dealing with improvement of the EE of the Croatian healthcare sector, that would be supported by the Program. Namely, it would follow the same organizational logic with the Green program team at the Ministry as the champion of the process, and Green teams within the medical facilities as the implementers of the concrete projects, most probably within the framework of established formal Environmental Management System (EMS).

### 4.1.2.2 Securing sufficient capacity of the Sanitary inspection by reassignment of some staff currently employed in Health ecology service of Public Health Institutes

As the sanitary inspection already operates with smaller staff than required by both EU criteria and criteria stated in the national Law on sanitary inspection, they should be exempted from all potential future further staff reduction in line with some default formula applied on all of the public sector (e.g. 1 newly employed for 2 retired, or similar).

A possible solution to strengthen the Inspection’s human capacities without additional financial burden on the system as a whole would be to transfer some of the staff from Health Ecology Services – which are in many cases over capacitated (measured by criteria of laboratory analysis performed annually per employee), while their staff have educational background and experience required for sanitary inspectors. The details of such reorganization are out of the scope of this ESSA study, however, the fact that, within the same system, there are two subsystems, one suffering from lack of capacities, the other from over
developed capacities, while these capacities are interchangeable, suggests that there is possibility for reorganization that would result with improved overall effectiveness and efficiency.

4.1.2.3 Upgrading of the Health Ecology Services from current status of the provider of EH laboratory services to the main implementer and coordinator of wider set of standard EH tasks and projects

The existing network of Health Ecology Services within the network of Public Health Institutes has significant capacity which is currently used in less than optimal way. This was already recognized in the Strategy’s elaboration of the Strategic Priority 4 (Reorganization and restructuring of medical facilities): i.e. efficiency and effectiveness of the network of the Counties’ Public Health Institutions could be increased through establishment of some logical Unions, functional or institutional merging, and concentration of the capacities and excellence for different kinds of expertise on one location within the Union. The prices for the services should be same in all PHI’s. The procurement should be centralized.

The way to strengthen both effectiveness and efficiency of the service is to 1) introduce more rational planning of development of the laboratory capacities than it was until now; 2) improve efficiency of the laboratories measured by number of analysis per employee by offering reassignment in Sanitary inspection; 3) widening the set of the Services’ tasks from the EH laboratory analysis to the standard set of EH tasks and projects.

4.2 Social aspects related suggestions for improvement

4.2.1 Recommendations for improvements of the system’s change / reforms management capacities

Efficient public information outreach and communication campaigns need to be developed as to emphasize that the prime objective of the reform is not reduction of the system but allocation toward more efficient health care and increased quality. Also, the Program on long term perspective have to explain and argument that existing model of health care does not provide services (in quantity and quality) in relation to present high expenditures. It is important to communicate that proposed measures do no not only deal with reductions and savings, but also bring quantifiable improvements in quality of services received by to show increasing benefits for citizens (e.g. number of new services in palliative care, new beds/facilities in long term care).

4.2.2 Recommendations for improvements of equity in access to health care services

Program activities could be used to build up system's capacity to implement social accountability activities and improve existing practices implemented to raise the voice of the patients and civil society in formulating health policies and programs, at local and national level. One of the key objectives could be to improve patient’s feedback on quality of health services and responsiveness. To assure comprehensive and sustainable partnership with patients and citizens, existing grievance procedure could be improved and better regulated (standards for responding to grievances received, availability of records, communication outreach practices, information flow, consultation process and transparency/access to information.)
5  Annexes

5.1  Matrix summarizing the proposed corrective actions / mitigation measures, including corresponding indicators of completion

Will be added…

5.2  Description of implemented public consultation plan / minutes of public consultations / summary of feedback received during the consultation process

The public consultations related to the subject of this ESSA report, its scope, findings and recommendation have been implemented in two rounds.

In the first round, at the very beginning of the ESSA process, the key stakeholders were engaged individually, in form of series of meetings. The objective of the meeting was to identify:

- appropriate scope of the ESSA,
- the main challenges of the present situation relevant for the Program,
- the main challenges which will probably be faced during the implementation of the foreseen Program’s activities;
- potential modification and upgrading of the Program that could make it more effective and efficient in its goal of Improving Quality and Efficiency of Health Services in Croatia.

Findings of all these consultations were used as important inputs in the preparation of the Draft ESSA report.

The second round of the public consultation was (WILL BE …) organized as presentation, discussion and final verification of the Draft ESSA report, with invited representatives of all key stakeholders, while open for participation for all the other interested public.

An important fact to be emphasized is that the Program is supporting implementation of the selected priority activities identified in the National Healthcare Strategy 2012-2020, whose preparation and verification also included wide consultations with all the key stakeholders.

Finally, the Draft ESSA was open for comments on the web pages of both Ministry of Health and WB.

Following sections presents summary of the minutes from the two phases of the consultation process.

5.2.1  Initial meetings with representatives of the key stakeholders

5.2.1.1  Consultations related to environmental issues

<table>
<thead>
<tr>
<th>NAME OF INSTITUTIONS AND THEIR CONTACTED REPRESENTATIVES</th>
<th>THE MAIN INSIGHTS / COMMENTS / SUGGESTIONS / CONCLUSIONS FROM THE MEETINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MINISTRY OF HEALTH:</td>
<td></td>
</tr>
<tr>
<td>Mr. Dario Sambunjak, Minister’s advisor for strategic</td>
<td>Ms Tošev confirmed the model established by House in order project – awareness raising and education, followed by audits identifying EE measures, followed by preparation of documentation and eventually implementation of EE projects - as effective. Actually, she is currently collecting up-to-date data on the status of medical facilities within the system regarding the Energy Efficiency measures (do they have energy certificates?; do they plan some EE projects?), which will serve for preparation of the need assessment and</td>
</tr>
</tbody>
</table>

49
The main topic discussed: THE HEALTHCARE SECTOR AS A POLLUTER; OPPORTUNITIES FOR GREENING

Ministry of environmental and nature protection / ENVIRONMENTAL PROTECTION INSPECTION (EPI)
Ms Jasna Paladin Popović, the Chief Environmental Inspector

The inspection has been officially (in written) consulted regarding their most recent insights and suggestions related to the environmental performance of the public healthcare facility network. No response was received, but EPI's direct participation has been eventually assessed as not necessary, as the used EPI's official, publicly available reports covering period 2008-2010 was assessed as sufficient for the assessment, and no measures were recommended for inclusion into the Program that would require more accurate up-to-date information from the EPI.

CLINICAL HOSPITAL CENTER ZAGREB:
Ms Draženka Topolovac, Head of the service for environmental protection, quality, and deratization / dezinsection / disinfection

KBC Zagreb is the largest medical facility in Croatia: build area of 150,000m²; 5,500 employees. Their team of three (Ms Topolovac, associate and nurse acting as overall coordination of the waste management system) is in charge of all environment-related issues. Clearly, in their work they collaborate with many other services, including technical service for issues related to all kinds of infrastructure, etc.

They have been regularly supervised by all relevant inspections (Environmental for waste and air; Water inspection for Waste waters). Ms Topolovac confirmed that the regular supervisions of the Environmental Inspection accelerated development of the current environment management systems.

She described rather complex medical waste management system that collects separately 40 different types of waste, at 6 main locations. They generate around 1 t/day of medical waste in the largest facility (Rebro), while in other five they generate around 200-300kg/day. Legal person authorized for collection and processing of the medical waste is selected every year, as a result of public procurement, with 1 year contract. They currently have contracts with two authorized waste operators: one for the infectious waste, which is by far the biggest share in total waste quantities, the other for all the other types. As part of the hospital preparation for formal quality accreditation, they prepared several guidance for employees defining SOP's for various environment related tasks, including waste management and procedures for accidental situations.

Emissions into air decreased as a consequence of reconstructed infrastructure. Croatian Electro power Company (HEP) is maintaining their central Heat generating unit, which is currently not operative, as they are connected on the municipal heat network.

They are also regularly monitoring emissions into air and waste water. They have waste water pretreatment plants next to the kitchen and next to the department for nuclear medicine.

They were actively involved in the House in order project promoting Energy efficiency in buildings owned and/or governed by public sector. Within the project they prepared documentation for modernization of one boiler, and implemented one rationalization project connecting hot water systems on two sites.

The priority measure for the next short term period is getting in compliance with the requirement for phasing out ozone depletion gasses from their refrigerating units.

She doesn't see a lot of space for improvements related to their waste management system (as they already have it quite elaborated and well established), however, she agrees that they are probably not a good example of an average Croatian hospital, which has less capacities for implementation all these systems. She agrees that there is a space for greening of the food procurement procedures, as otherwise they are forced to select offers based on only smaller price criteria, which often come at the cost of the quality.

Regarding Energy efficiency, there is a lot of space for improvement, but their technical service cannot do it on their own, without targeted external TA.

Confirmed, based on personal experience and communication with peer companies that larger sources (which include all public sector medical facilities) are in compliance with the legal requirements. The "whole in the system" are numerous smaller producers, that all together generates significant amounts of medical
| **Medical waste management,** which also implement various educational programs on subject, and recent awardee of the Green mark for excellence in in green businesses | waste, while because of their number, they are harder to control. Many smaller sources formally fulfill their legal obligation – i.e. sign contract with the authorized collector of medical waste – however they are throwing major part of the collected medical waste together with municipal solid waste – which is forbidden, but also not easy to control and track down. An anecdote with a private dental medicine clinic says that after being subjected to the Environmental inspection upon report from the neighbors that in their garbage containers observed significant quantities of potentially infectious waste, reported quantities has increased from 10kg to 20kg!! |
| Environmental Protection Agency Mr. Vibor Bulat, related to the subject of medical waste | Mr Bulat directed us on relatively recent report Medical waste management in Croatia issued by EPA. An important remark was that even some of the hospitals are not fulfilling their obligation of reporting on generated medical waste to the Register of environmental polluters. |

**The main topic discussed: RADIOLOGICAL SAFETY AND RADIOACTIVE WASTE WITHIN THE HEALTHCARE SECTOR**

| State Office for Radiological and Nuclear Safety Ms Ivana Kralik – Head of the sector for radiological safety Ms Nevenka Novoselec – Head of the Unit for Project Implementation | Situation with radiological safety in hospitals is not neither satisfactory nor in line with the adopted legislation (e.g. some obligations from Ordinance adopted in 1999 are implemented only in two hospitals). Both provided service quality (in a sense of getting results with the least possible harmful side effects, most notably at radiology departments) and safety (in a sense of safe handling and management of the radioactive substances, primarily in nuclear medicine departments which use unsealed sources) are not satisfactory. The situation differs among hospitals, mainly as a function of the “human factor” (education and motivation of the staff in charge). KBC Rijeka and KBC Osijek could be role model for others. Regarding the radioactive waste from medical facilities, majority of larger sources acquired more recently are returned to the seller, after it complete its lifecycle in the medical facility. Older sources, such as Cobalt units are mainly replaced by linear accelerators technology. All sealed sources are handled in line with procedures – if not needed, first offered to someone interested, or returned to producer, or deposited in the central national depot for radioactive waste – with no exception. The problems with radioactive pollution are possible in nuclear medicine departments that use unsealed / open sources. The State Office – which has double role of inspection and advisor / provider of Technical Assistance to those dealing with sources of radiation – is currently intensively working on improvement of the situation. The main activities include: education, awareness raising, preparation of guidance for the best radiology safety practice in radiology, radiotherapy and nuclear medicine; assistance in acquiring of the equipment needed for higher safety and quality. The State Office has up-to-date and accurate need assessment related to radiological safety in medical facilities. The limiting factor for improvement of the situation is lack of money. Up to now, a subject of radiological safety was not included as an eligible theme in Operative Programs for EU funds, meaning that they could not use EU funds for their important and urgent work. If included in Operative Programs which are currently under preparation, for period 2014-2020, they have already prepared projects waiting for financing. |

**The main topic discussed: THE AREAS UNDER THE JURISDICTION OF THE SANITARY INSPECTION, including: chemicals and biocides safety, environmental noise protection and protection from nonionizing radiation**

| SANITARY INSPECTION: Mr. Bojan Vidović – Head of Service for Legal Support and Expert surveillance Ms Biserka Bastijačić Kokić – Head of department for Chemicals and Biocidal products; Ms Jasna Mesarić – Head of Department for Objects of Common Use and Noise Protection; Mr Zdenko Pavković – Head of Department for Radiation protection Ms Marija Pašalić, Ms Kristina Blagojević – Department for Food safety | The main comment of all contacted representatives is that Sanitary inspection is already understaffed; age structure of the staff is such that in the following years, the situation will rapidly deteriorate; employments of replacements are not allowed. The result is threat to normal functioning of the Inspection. In some regions, for some areas, the capacities are really overstretched – up to 1 inspector per 35000 inhabitants (the Law requires 1 per 15.000!) They are trying to compensate lack of capacities by more rational allocation of the existing capacities, taken into account areas of the highest risk (e.g. touristic coastal area during the summer, or focus on fairs during the festivities) as well as results of the previous inspections and preliminary screenings. The newly adopted EU legislation, and obligations resulting from that, is serious challenge for all subjects affected by these changes. The smaller they are, the larger the challenge, as requirements are almost the same for SMEs as for large companies, while SMEs often lack administrative capacities and in-house know-how required for fulfillment of the legal requirements. If they were better capacitated, they could spend more time advising and educating those SME’s. As it is not the case, they simply have no time to do that, while based on their experience that would be necessary. Some of the inspectors expressed concern regarding the restructuring and reorganization foreseen in the Program, as in their experience, reorganizations are often insufficiently prepared, and therefore although in theory they should improve efficiency and effectiveness of the system, in practice, they result with opposite, as new rules slow down or even block the system. |
| CROATIAN INSTITUTE FOR | The issue of implementation of Ordinance on Good Laboratory Practice - GLP (OG 38/08), as well as |
associated National Program for surveillance of compliance with the principles of GLP (OG 61/12) have been clarified. Namely, although the Article 13.4 of REACH Regulation (EC) No 1907/2006 requires that ecotoxicological and toxicological tests and analyses shall be carried out in compliance with the principles of good laboratory practice provided for in Directive 2004/10/EC or other international standards recognized as being equivalent by the Commission or the Agency ... (with remark that No other international standards have yet been recognized as being equivalent to GLP, the fact that no Croatian laboratories has been yet accredited in line with Ordinance is not barrier to implementation of the REACH regulation in Croatia, because laboratory tests are required only as part of the registration of new substances, and no Croatian legal person dealing with chemicals has such needs.

Also, regarding the registration process at ECHA (European Chemicals Agency), although it is rather demanding for the smaller companies, it is facilitated through the mechanism of Substance Information Exchange Forum (SIEF), through which groups of chemicals producers and traders dealing with specific substance, led by the market leaders for that substance share costs, join capacities and prepare common study / register for the substance, which is later on customized by specificity of each legal entity registering at ECHA.

<table>
<thead>
<tr>
<th>TOXICOLOGY AND ANTIDOPING</th>
<th>Mr Zdravko Lovrić, director</th>
</tr>
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| THE MAIN TOPIC DISCUSSED: ENVIRONMENTAL HEALTH & EH LABORATORY SERVICES |
| CROATIAN INSTITUTE FOR PUBLIC HEALTH | Mr. Krunoslav Capak – deputy director of the Institute and Head of the Health ecology service within the Institute |
| The area of Environmental Health not sufficiently developed in all its components, as a lack of stable financing and management from the level of the Ministry. Health Ecology Services within the Public Health Institutes rely for financing only on market, which directed them to develop only laboratory capacities, while it could / should be much more: coordinator of inter-sectoral cooperation in area of Environmental Health; promoter / coordinator / facilitator of the Greening Program within the Health Sector; the main implementer of the comprehensive long term monitoring and analysis programs, which would provide data for environmental health indicators, which is the foundation for the evidence-based planning of the public health policies, prevention measures and activities. |

| ENVIRONMENTAL PROTECTION AGENCY | Ms Mira Zovko, related to the general area of Environmental Health |
| She confirmed that the area is still relatively undeveloped, partially because of its intrinsic complexity, but also because of a vertical separation of the jurisdiction and lack of cooperation and coordination required for harmonized action by several Ministries. |

5.2.1.2 Consultations related to social issues

To be added …

5.2.2 Presentation and discussion of the Final draft ESSA report at the WS with invited representatives of all the key stakeholders and other interested public

To be completed after the WS …

5.3 A brief assessment of Integrity issues related to the Program

The three main areas identified as relevant for the assessment include:
− Transparency, integrity and accountability in selection of the activities included in the Program;
− Systems capacity to handle risks of fraud and corruption throughout implementation of the Program activities;
− Integrity issues within the Croatian health sector supported through the Program.

5.3.1 Transparency, integrity and accountability in selection of the Program’s activities
The first step in assuring transparency, integrity and accountability in selection of the activities included in the Program was made by focusing Program activities on the strategic problems and priorities identified in recently adopted National Health Care Strategy 2012–2020, preparation of which included a wide consultation and a consensus building among all key stakeholders. The current doctors and nurses strike indicates that implementation of the reforms listed in the Strategy will not pass without strong oppositions and disagreements when it comes to operational details, however, the general consensus has been achieved among the key stakeholders regarding the strategic problems and priorities identified in the Strategy. Consequently, PforR also supports necessary reforms identified and selected through open democratic process.

Transparency and accountability in selection of the concrete activities supported by the Program will be secured through consultations and negotiations with the key stakeholders which will happen before adoption of any of the foreseen Action plans for implementation of the Strategy, including Master plan for hospitals and others. The current strike again indicates that these processes will have to be wide open and very thorough in order to get the implementation documents accepted by critical mass of the key stakeholders.

Consequently, it is fair to conclude that the PforR will support implementation of priority reform measures and activities of the Croatian Health Care System, which have been and will be identified and selected through open democratic process.

5.3.2 Systems capacity to handle risks of fraud and corruption throughout the Program implementation
The most solid aggregated indicator of the borrower’s systems capacity to handle risk of fraud and corruption is the recent Croatian EU membership, as establishment and proven reasonable effectiveness of all systems relevant for handling of fraud and corruption was one of the key and the most scrutinized criteria for Croatian EU membership.

More specifically, Croatia has EU harmonized legislation framework and institutional arrangement for public procurement. The main law regulating the subject of public procurement including the procedures for submission and processing of complaints is Public Procurement Act (Official Gazette 90/2011, 83/2013) that enters into force on 1 January 2012.

As stipulated by the Act on the State Commission for Supervision over Public Procurement Procedure (Official Gazette 18/2013), the central body responsible for handling of all complaints on the public procurement in Croatia is the State Commission for Supervision over Public Procurement Procedure. The State Commission standard procedures are in line with the highest standards of transparency and accountability, all their decisions being publicly available on their web portal (www.dkom.hr), with content available both in Croatian and English languages.

The State Commission has five members, one of whom acts as the Head, and one as Deputy Head. They are appointed by Croatian Parliament on the proposal of the Croatian Government. Three members of State Commission, one of which has to be Head or Deputy Head, constitute a quorum necessary for
decision-making. Decisions of the State Commission are passed by a majority vote at the council meetings. No Commission member shall abstain from voting.

The State Commission submits to the Croatian Parliament annual reports on its work (if requested by the Parliament, reports are submitted for a period shorter than one year). The report includes data and analyses concerning legal protection in public procurement procedures, granting of concessions and selection of private partners in public-private partnership projects. The reports has specified content, including the data on: total number of the appeals received; the number of appeals received by individual stages of the procedure; the number of cases categorized by various possible outcomes (e.g. dismissed, rejected, upheld or suspended appeal procedures; approval of continuation of the procedure and/or award of a public procurement contract; annulled decisions, procedures and actions of the contracting authorities due to unlawfulness; annulled public procurement contracts); the number of fines levied and the amounts thereof; average time for adoption of decisions both form the date of receipt of appeal and from the date of completion of the appeal case documentation; the contracting authorities having five or more appeal procedures before the State Commission, including the number of legitimate appeals in such appeal procedures and the total number of implemented appeal procedures related to the concerned contracting authorities; the most common reasons for lodging appeals; the most common irregularities established by the State Commission; legal actions against the State Commission’s decisions; the number of submitted accusatory motions.

According to the Report, in 2011, altogether 1,921 complaints were received (7.61% of the total number of the public procurement procedures in Croatia in 2011.); out of which 1,888 were solved until 31.12. Approximately ¼ of complaints were adopted, resulting with annulation of the public procurement process, while ¼ was rejected and ¼ dismissed. Seven charges were filed at court for violation of the Law on public procurement. Contracting authorities having five or more appeals included also a number of the hospital and clinic centers, as they are relatively frequent buyers; however, percentage of the adopted complaints in their case was below average. The total value of public procurements that were scrutinized because of the complaints was above 3.5 billion USD. The average time for adoption of decision was 61 days, while average public procurement duration was 63 days.

In line with the Regulation on control over the implementation of the Public Procurement Act (Official Gazette 10/12), the Ministry of economy is the central governmental body responsibility for control of the law implementation, meaning that it also has to react (within 8 days period) based on the received complaints related to some public procurement procedure. If the law violations are confirmed, the Ministry files charges against responsible parties at court.

The main body within the Croatian criminal justice system in charge of anticorruption is Bureau for Combating Corruption and Organized Crime (generally known as USKOK) attached to the State Attorney office, formed in 2001, whose functioning is regulated by Law on Bureau for Combating Corruption and Organized Crime (Official Gazette 76/09, 116/10, 145/10, 57/11, 136/12). It has a counterpart in the Criminal Police Directorate (the Police National USKOK), as well as in the judiciary (the Court Departments for Criminal Cases in the Jurisdiction of USKOK). Already completed and still ongoing processes against the highest political figures in Croatia (including the former Prime Minister and some other Ministers) are fair indicators of the system’s capacity, operative effectiveness and independent functioning. Any potential allegations of fraud and corruption in the Program should be submitted to USKOK, which will then react by initiating investigative procedure.
As a conclusion, the systems handling the risks of fraud and corruption in implementation of the Program are in place and functioning.

**5.3.3 Integrity issues within the Croatian health sector supported through the Program**

The National Health Care Strategy itself admits that health sector is very prone to corruption, and that Croatia is not an exception to it. A long waiting lists and lack of transparency in their creation and functioning, lack of clinical protocols and care pathways, lack of quality standards, monitoring and control within the system, all of these create environment which allows corruptive behavior.

Consequently, the Strategy among the priority measures also includes Combating the corruption and non-formal payments in the health sector.

The ministry has established so called White Phone – a free phone service at which users / patients can report their complaints on the work of the medical staff within the sector, or any other complaints regarding their inability to realize their rights on medical services. Through the established service users are informed about their rights and about the next steps through which they should be able to realize them. If the complaints cannot be solved immediately, they are recorded and patient is informed in writing on the solution of the reported problem. Received complaints can also trigger some further investigative or even corrective action within the system.

In average, around 900 complaints are received monthly, out of which ¼ are complaints related to unprofessional behavior of the medical staff (long waiting, unkindness, inability to get information); 1/3 are related to issues with the health insurance; 10% are related to waiting lists and e-appointments for various medical treatments; while the rest are questions related to addresses, working hours, contacts in various medical institutions. Complaints related to wrong medical treatment are relatively rare.

The service has been criticized by the representative of the Croatian Association for the Promotion of the Patient’s Rights for being more complaints collecting and recording mechanism than operative in assisting patients in solving their problems.

More specifically, regarding the expected impacts of the PfR on the integrity within the Croatian health sector, it is clear that the Program whose focus is on improving systems efficiency through better management, structure, organization and control directly contributes to creation of the working environment which leaves less space for corruptive behavior.
5.4 Risk Screening Form: the result of the initial phase of the ESSA process

1. Associated or Likely Social and Environmental Effects
(This section describes the potential benefits, impacts and risks that are likely to be associated with the Program.)

<table>
<thead>
<tr>
<th>RISKS and/or OPPORTUNITIES TO ENHANCE BENEFITS</th>
<th>ASSESSMENT</th>
<th>POSSIBLE MITIGATION MEASURES (SYSTEMS CAPACITY BUILDING, ETC.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental risks could be related to one of the TWO MAIN ENVIRONMENTAL ASPECTS OF THE CROATIAN HEALTHCARE SYSTEM</td>
<td>Foreseen Program’s activities have neither negative nor positive environmental impacts. Namely, regarding negative impacts related to the first listed aspect, the whole focus of the Program on improving quality and efficiency through improved management, reorganization, modernization, performance monitoring and control, as a side effect, very likely decreases probability of environmental misbehavior within the system. This said, it should be kept on mind that changes in the system should be properly prepared (i.e. in detail analyzed, planned, staff and management prepared, simulated, piloted), as otherwise reform could result only in deterioration of the current procedures, without replacing them with effective substitutes (e.g. ineffective centralization of procurement causing delays and insufficient quality of acquired goods and services, having negative consequences on the system’s environmental performance). Regarding the second listed aspect, there are no Program’s negative impacts as relevant mentioned elements within the systems are not targeted by the Program at all. On the other side, regarding positive impacts, although Program contributes to creation of the context in which measures leading to positive environmental impacts are more probable, environmental measures and targets that would imply them are not explicitly mentioned in the Program, which – taking into consideration relatively weak reform management capacity within the system, and tremendous challenges of foreseen reforms – makes them very improbable. Implemented environmental screening of the Croatian healthcare system against set of standard healthcare specific environmental themes has shown that there are measures that should be considered for inclusion into the Program, based on one of the following three criteria:</td>
<td>Candidate measures that should be further investigated through more detailed assessment of the relevant problem context, associated management systems and their capacities (in the foreseen subsequent phases of the Program related ESSA process), and then – based on the findings – considered for inclusion into the Program includes:</td>
</tr>
<tr>
<td>The first is the system as resources- and energy- consumer and environment polluter, which includes risks related to the following issues:</td>
<td></td>
<td>- Preparation and implementation of project improving Energy Efficiency of the medical facilities, co-financed from EU structural funds (these could include more comprehensive set of measures dealing with increased resource-efficiency, including Green building design; using of Renewable Energy Resources; Water conservation measures) The system has required capacity – i.e. sufficient human resources within the medical facilities’ technical services – however, better organization and some well-targeted TA is required, with the Ministry as an coordinator and champion of the process. (A/C type of measure)</td>
</tr>
<tr>
<td>- Waste generation (including hazardous waste: infectious, chemical, toxic, drugs)</td>
<td></td>
<td>- Initiation of Green Public Procurement practice (A/C type of measure)</td>
</tr>
<tr>
<td>- Radiation safety within medical facilities and radioactive waste</td>
<td></td>
<td>- A fresh look on the possibility to improve food management within the medical facilities (minimization of ecological footprint with co-benefit in improved quality and health impacts of food served, through green procurement of the fresh, seasonal and organic food; reduction of waste)</td>
</tr>
<tr>
<td>- Emission in air, waste water</td>
<td></td>
<td>- Medical waste minimization through improved waste management within the hospital (staff education and advances in selective waste collection).</td>
</tr>
<tr>
<td>- Energy (in)efficiency</td>
<td></td>
<td>- Establishment of Environmental Management Systems within the medical facility. This could connect and increase efficiency and effectiveness of the above listed individual environment-related measures within the medical facilities</td>
</tr>
</tbody>
</table>

The second is that some elements of the system play important role in the overall national environmental protection system, within the area of Environmental Health, which includes: water, air, soil quality; food, chemicals, common use items safety; noise protection, protection from ionizing and nonionizing radiation. In regard to this, risks are related to the possibility that Program will negatively impact effectiveness and efficiency of the relevant elements within the system, primarily:

- Ministry of Health’s Directorate for
### 1.2. SOCIAL

#### RISKS and/or OPPORTUNITIES TO ENHANCE BENEFITS

<table>
<thead>
<tr>
<th><strong>ASSESSMENT</strong></th>
<th><strong>POSSIBLE MITIGATION MEASURES (SYSTEMS CAPACITY BUILDING, ETC.)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Social risks / opportunities to enhance benefits are related to the following four main areas:</td>
<td>Although all these changes are overall in favor of both patients and the employees within the system, as changes aims for higher overall quality for the patients and better organized and managed system for the employees, all changes of these type always have opposition, as overall improvements specific mitigation measures have to be prepared.</td>
</tr>
<tr>
<td>- Internal and external opposition to the reforms – i.e. structural and procedural changes in the Croatian healthcare sector;</td>
<td><strong>- Preparation and implementation of projects improving radiation safety within medical facilities (B/C type)</strong></td>
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<td>- Social equity issues, which include various potential, already existing disparities in access to quality healthcare among Croatian regions, rural and urban areas, rich and poor, etc.</td>
<td><strong>- Secured sufficient capacity of the Sanitary Inspection for implementation of all requirements of the relevant EU legislation</strong></td>
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<td>- Social accountability issues, which include primarily patients ability to influence healthcare policies and system by feedback, participation in decision making, etc.</td>
<td><strong>- Improved cooperation among relevant Ministries (including Healthcare, Environment Protection, Agriculture) related to the subject of Environmental Health</strong></td>
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<td>- Impacts on employees within the system, both medical and non-medical</td>
<td><strong>- Improved efficiency and effectiveness of the existing Environmental Health laboratories (primarily reorganization and accreditation processes).</strong></td>
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The Program foresees system changes and upgrades in both the system’s organization (primarily reorganization of the health facility network aiming for higher efficiency and quality of services for patients) and the ways in which the health care services are provided (e.g. quality monitoring and control, defined care path protocols and procedures, centralized procurement ...). The health system has been subject to a number of reforms, seeking to promote efficiencies and secure adequate health protection. Cost containment measures have only been partly successful, and have shifted a proportion of costs on to users. Negative perception and reactions based on that impacts are the major risk. Also Program could be perceived by interested public as reduction of their rights in the sense of decreased accessibility of health services in the region (county) where rationalization will happen. The social impact could be recognized more serious as there are big regional differences and regional disproportions concerning development and employment as key social determinants of health.

Transparency in the high-level decision making in the health care system is area which continuously has to be improved. Some initiatives are taken to improve transparency in the system, but much improvement is still needed in this area. Since 2010 patients’ representatives are members of county health councils. Since 2012, some positive changes have implemented: strategy
2. Environmental and Social Context

(This section describes the geographical coverage and scope of the Program and environmental and social conditions in the Program area that may have significance for Program design and Implementation.)

2.1 ENVIRONMENTAL CONTEXT

During the EU accession process, Croatia adopted environmental legislation harmonized with EU acquis, which has very high environmental standards. Environmental management capacities also have strengthened considerably, although a lot yet has to be done, including primarily significant improvements in current waste management practices; but also related to energy efficiency; use of renewable sources of energy; systematic monitoring of state of the environment; environment and sustainability-related education and awareness raising of the general population, businesses and public sector managers.

General environmental awareness, responsibility and behavior of the population is much lower than in some EU leaders in this area. E.g. selective waste collection, which as an daily routine is good indicator of environmental "culture", is at the very beginning in Croatia.

More specifically, regarding the area of Environmental Health, the fact that there are no frequent accidents involving environmental health risks indicates that systems are in general reasonably effective. However, there is a lot of space for improvements in efficiency, through better organization and management, primarily better inter-sectoral / inter-Ministerial cooperation than exists at the moment.

2.2. SOCIAL CONTEXT

The National health care strategy 2012-2020 addressed some key social determinants relevant for health and health care: According to the GDP per capita, Croatia falls back significantly behind the EU member states. It is important to notice regional disproportions of Croatia concerning development. The least developed counties are the counties of the Central and Eastern Croatia, and by far the highest GDP per capita is in the City of Zagreb. Average unemployment rates in Croatia are higher than in EU 27, EU 15 or EU 12. The most unemployed people in February 2012 were without education, with elementary school or high school qualifications. The unemployment rate among the young in 2011 was between 30 and 40%. Regional disproportions in Croatia also exist in unemployment rates, and most counties in 2010 had higher unemployment rates than the Croatian average. National health surveys showed barriers to an equitable health care utilization among different population groups with various economic status and living in different regions of the country, controlling for health care needs. Respondents living in suburban and rural settlements had to travel longer distances to access health care facilities and had therefore higher expenses. Respondents living in urban areas reported long waiting time and negative attitude of the health personnel as the main barriers to care.

Among problems of vulnerable groups National health care strategy 2012-2020 particularly emphasized:

- "greatest contribution to the disease burden of the elderly people are chronic diseases. Share of hospitalized people at the age of 65 and over amounts to 30% of the total
number of people treated at hospitals in Croatia.
- “there are more than 519,000 persons with disability in Croatia, which is about 12% of the total population. The most common conditions causing disability are impairments of the locomotor system, mental disorders, impairments of other organs and body systems and impairments of central nervous system.”

Although transparency in the high-level decision making in the health care system is area which continuously has to be improved, current situation presents well developed communication and cooperation with patients’ and citizens representatives. Apart of well-defined legislation there are more positive examples are: participatory approach during Strategy 2012-2020 development process, regular meetings with patients’ representatives in the Ministry of health, role of the patients’ representatives in the county health councils, free call service /Bijeli telefon/ which enables patients to present their complaints on health workers or any other complaint in relation to realizing their right to health care.

It is important to notice ongoing strike organized by Croatian medical doctors’ trade union. Strike was organized by and Medical doctors’ and Nurses’ trade unions as demand of hospital workers for restoration of previous benefits scrapped earlier this year. Main problem were overtime payment and for on call duties. After successfully completed negotiations, Nurses’ trade union stopped the strike. Negotiation between Croatian medical doctors’ trade union and Government are still ongoing /written on November 3, 2013/

### 3. Program Strategy and Sustainability

(This section situates the Program, and its environmental and social management systems, within the country’s broader development strategy, with particular emphasis on identification of factors that may impede successful Program management over time. Specific questions that should be addressed include: Strategic context: What is the long-term vision of this Program in relation to the country’s development strategy?; Does it include explicit environmental and social management objectives? Do Program activities commit, constrain or alter decisions of future generations? Are there any potential roadblocks to ensuring the environmental and social sustainability of the Program after implementation?)

#### Environmental considerations:
- Program is fully in line with the national development priorities. It supports structural reforms in one of the most complex area which currently present significant financial burden on the state budget. The reforms within the healthcare system supported by the Program are urgently needed necessities.
- Amending the Program with the components that would contribute to the “greening” of the Croatian healthcare sector would have positive environment-related effects not only within the healthcare system, but also outside of the system. Concretely: a healthcare system as a significant consumer has relatively significant market leverage that can be used for greening of the general markets; as a healthcare system is a big employer, positive environmental changes within the system impact environmental behavior of the significant number of people / families; as significant sector within the public sector, it would show a way for other sectors to follow.
- With such “green amendments, the Program would become also a significant initiative on environment-related development agenda in Croatia (in areas of e.g. waste management, Energy efficiency, Renewable sources of energy).

#### Social considerations:
- Program is fully in line with the national development priorities. It supports structural reforms in one of the most complex area which currently present significant financial burden on the state budget. The reforms within the healthcare system supported by the Program are urgently needed necessities.
- Program supports changes that should result with more efficient, higher quality healthcare services, better suited to the needs of patients. Having needs of the patients as a cornerstone for planning of the system is positive, both from the point of issues of social equity and social accountability. In order for this to happen, the Hospital Master Plan under preparation should recognize and reflect specific needs of the regions, significance of the healthcare system in certain region as employer, a factor of regional development policy, prerequisite for development of certain types of economic activities (medical tourism, general tourism, …).
- Reorganization of the system supported by the Program is opportunity to improve efficiency and effectiveness of human resources within the system. In order for this to happen, a Strategic plan for human resources in health care should be prepared during implementation of the Program.

### 4. Institutional Complexity and Capacity

(This section describes organizational, administrative and regulatory structures and practices, as they relate to environmental and social assessment, planning and management. Specific questions that should be addressed include: Does the Program involve multiple jurisdictions or implementing partners?; Capacity or commitment of counterpart to implement regulations and procedures?; Is there a track record of commitment and implementation experience on environment and social aspects?; Are there any known institutional barriers that would prevent the implementation of this Program? Is there sufficient institutional capacity to address the environmental and social impacts of this...
### Environmental considerations

- The main challenges in successful fulfillment of the potential environment related objectives of the Program (the most realistic are those related to Energy efficiency in the sector, and medical waste management) are organizational. A better cooperation between central authorities and individual medical facilities, with clearly defined roles and duties, is commonly the main barrier for realization of otherwise easy reachable goals. As the Program foresees more centralized management in other activities (e.g. financial consolidation, centralized public procurement), it will create favorable settings for efficient implementation of suggested environment related activities.
- Regarding the trends and relevant track record, the general trends with environmental performance of the Croatian healthcare system are positive. However, it can be further accelerated.

### Social considerations

There are several acts which regulate the work of the health care professionals, health services and health care reform. The National health care strategy 2012-2020 addressed the equity in access to funds for maintaining or improving health, fairness in distribution of such funds and solidarity among social groups and generations as fundamental values and principles. These principles are also set by the acts on health care and mandatory health insurance. The Croatian Health Insurance Fund (CHIF) uses the National Health Plan and the Plan and Program of Health Care Measures to prepare its annual plans for the provision of health care services. Based on these annual plans, it passes regulations on health insurance entitlements and signs contracts with health care providers. Providers contracted by the CHIF operate within the National Health Care Network. Thus all planned reforms could be implemented through already existing legislation or procedures. Some constrains during PforR implementation could appear as there are recognized some important weaknesses in the health care system (in the Strategy 2012-2020):
- Health needs assessment is not properly developed in Croatia
- Lack of understanding and rejecting the need for reform measures in the Croatian society.
- Undermined trust in public sector institutions as a result of perceived corruption.
- Regionally uneven economic strength and ability to finance health care.

### 5. Reputational and Political Risk Context

(This section describes environmental and social issues, trends or other factors that may cause the program, the country, or the Bank to be exposed to significant reputational or political risk. More specifically, questions that should be addressed include: Are there any Potential governance or corruption issues? Are there any political risks associated with this sector or proposed Program? Is the sector or Program known to be controversial?)

#### General considerations

Health care sector is one of the toughest sectors requiring urgent structural reforms. The task is huge and complex. Consequently, there are no straightforward non-controversial solutions. However, it is clear that reforms are necessary, and that it should focus on exactly the two issues emphasized in the Program’s title: Quality and Efficiency of health services.

#### Environmental considerations

- As there are no major environment related risks associated to the Program, there are also no environment related reputational and political risks associated to the Program.
- If amended with the “greening activities”, the Program can have significant positive role in environment-related processes in Croatia.

#### Social considerations

- The ongoing strike clearly indicates that no reform of the Croatian health sector will pass without strong opposition and long negotiations. The most that can be done on the side of Program, as a measure that both improves chances for successful implementation and mitigates reputational risks in its implementation is clear and effective communication of the Program’s objectives. Clear arguments explicitly addressing all controversial issues related to the identified areas of social equity and employees’ rights have to be communicated. The Program implemented in this manner will itself present a new contribution to socially accountable healthcare system in Croatia.
**Integrity, Fraud & Corruption considerations**
- Recent developments in anticorruption activities in Croatia (former high government officials prosecuted at the Courts, etc), as well as established system of public procurement in line with EU standards can arguably serve as guarantee that governance and corruption issue risks associated with Program are reasonably low.

**6. Overall Assessment:**
(This section describes the overall risk profile for the Program, based on the team’s subjective weighting and aggregation of all factors identified above. More specifically, the section should assess if the proposed Program suitable for PforR or would it be better suited to a specific investment loan? Environmental and social risk factors should be summarized separately).

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<th>General considerations</th>
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<td>The Program is addressing a tough issue of reform of the system which is currently neither sustainable, nor offering high quality services, nor staffed with the satisfied workforce. Ongoing strike, huge accumulated and continuously further generated financial deficits, long and longer waiting lists for certain healthcare services with significant disparities in accessibility in reality – all these confirm the graveness of the present situation. Consequently, there is no easy and straightforward solution for successful Program implementation. However, there are also two reassuring facts. First, the Program is supporting implementation of the Strategy that has been prepared and adopted through wide consultation with all key stakeholders, which means that there is consensus of the key stakeholders regarding the Programs objectives and approaches. The second, as suggested already in the Program’s title, the Program is targeting inefficiency within the system, in order to IMPROVE overall quality. This aspect of the Program should be emphasized continuously, as it makes it much more acceptable than would be a case it the Program is focused on savings within the system based on the reduction of the services provided. Because of the complexity of the task addressed by the Program, the PforR format is no doubt the best suited for the task, as it gives the Program level of flexibility required for successful implementation of the Program which will include lot of negotiations among the key stakeholders.</td>
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<th>Environmental aspects specific considerations</th>
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<td>There are no Program related environmental risks. However, the Program presents a great opportunity for initiation of more systematic “greening” of the healthcare sector in Croatia, especially related to the energy efficiency, water conservation, waste management practices, initiation of green purchasing practices.</td>
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<td>The Program is opportunity to explicitly readdress important issue of social equity in healthcare, i.e. existing and growing disparities in accessibility of quality healthcare service among different regions, rich and poor, urban and rural, general population and especially vulnerable groups. The foreseen reorganization activities are opportunity for establishment of the innovative models of healthcare that will better serve needs of currently the most vulnerable groups (including older, low income population in more distant, rural areas, poorly connected by public transport network with regional centers). The foreseen reorganization aiming for higher efficiency, improved control and more result-based payments is an opportunity for establishment of the more transparent and motivating working surroundings for all employees. The implementation of the Program addressing some of the toughest challenges of the Croatian society, which will necessarily include a lot of communication and negotiation among the key stakeholders, will itself contribute to the higher social accountability of the system.</td>
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