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Report No: PAD3376

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF EUR25 MILLION (US\$28.9 MILLION EQUIVALENT)

TO THE

REPUBLIC OF CROATIA

FOR A

CROATIA: TOWARDS SUSTAINABLE, EQUITABLE AND EFFICIENT EDUCATION PROJECT  
(SEE EDUCATION)

November 05, 2021

Education Global Practice  
Europe and Central Asia Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective September 30, 2021)

Currency Unit = Croatian kuna (HRK)

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US\$0.86423 = EUR 1.0

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HRK 6.48 = US\$1.0

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US\$1 = SDR 0.58

## FISCAL YEAR

January 1 – December 31

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## ABBREVIATIONS

|          |  |
|----------|--|
| CARNET   | Croatian Academic and Research Network                 |
| CHMP     | Cultural Heritage Management Plan                      |
| COVID-19 | Coronavirus disease of 2019                            |
| CPF      | Country Partnership Framework                          |
| DA       | Designated Account                                     |
| ECEC     | Early Childhood Education and Care                     |
| ESF      | Environmental and Social Framework                     |
| ESCP     | Environmental and Social Commitment Plan               |
| ESMF     | Environment and Social Management Framework            |
| ESMP     | Environment and Social Management Plan                 |
| ESS      | Environmental and Social Standards                     |
| ETTA     | Education and Teaching Training Agency                 |
| EU       | European Union   |
| EUR      | Euro (currency)  |
| E&S      | Environmental and Social                               |
| GDP      | Gross domestic product                                 |
| GPS      | Global Positioning System                              |
| GRM      | Grievance Redress Mechanism                            |
| GRS      | Grievance Redress Service                              |
| HCI      | Human Capital Index                                    |
| HRK      | Croatian kuna  |
| IBRD     | International Bank for Reconstruction and Development  |
| IDA      | International Development Association                  |
| IFR      | Interim financial report                               |
| IRR      | Internal rate of return                                |
| MoF      | Ministry of Finance                                    |
| MSE      | Ministry of Science and Education                      |
| NCVVO    | National Center for External Evaluation of Education   |
| NDS      | National Development Strategy                          |
| NPV      | Net present value                                      |
| NRRP     | National Resilience and Recovery Plan                  |
| OECD     | Organisation for Economic Co-operation and Development |
| OHS      | Occupational Health and Safety                         |
| PAD      | Project Appraisal Document                             |
| PDO      | Project Development Objective                          |
| PISA     | Programme for International Student Assessment         |
| PIU      | Project Implementation Unit                            |
| POM      | Project Operations Manual                              |
| PPSD     | Project Procurement Strategy for Development           |
| RAS      | Reimbursable Advisory Services                         |
| RRF      | Recovery and Resilience Facility                       |
| SAO      | State Audit Office                                     |

|        |   |
|--------|---|
| SEA/SH | Sexual Exploitation and Abuse and Sexual Harassment |
| SEE    | Sustainable, Equitable and Efficient                |
| SEP    | Stakeholder Engagement Plan                         |
| SES    | Socioeconomic status                                |
| US\$   | United States Dollar (currency)                     |
| WB     | World Bank  |
| WBG    | World Bank Group                                    |
| WDS    | Whole Day School                                    |

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## DATASHEET

### BASIC INFORMATION

|              |   |  |
|--------------|---|--|
| Country(ies) | Project Name  |  |
| Croatia      | Croatia: Towards Sustainable, Equitable and Efficient Education Project |  |
| Project ID   | Financing Instrument  | Environmental and Social Risk Classification |
| P170178      | Investment Project Financing  | Moderate                                     |

### Financing & Implementation Modalities

|   |  |
|---|--|
| <input type="checkbox"/> Multiphase Programmatic Approach (MPA)   | <input type="checkbox"/> Contingent Emergency Response Component (CERC)  |
| <input type="checkbox"/> Series of Projects (SOP)                 | <input type="checkbox"/> Fragile State(s)                                |
| <input type="checkbox"/> Performance-Based Conditions (PBCs)      | <input type="checkbox"/> Small State(s)                                  |
| <input type="checkbox"/> Financial Intermediaries (FI)            | <input type="checkbox"/> Fragile within a non-fragile Country            |
| <input type="checkbox"/> Project-Based Guarantee                  | <input type="checkbox"/> Conflict  |
| <input type="checkbox"/> Deferred Drawdown                        | <input type="checkbox"/> Responding to Natural or Man-made Disaster      |
| <input type="checkbox"/> Alternate Procurement Arrangements (APA) | <input type="checkbox"/> Hands-on Enhanced Implementation Support (HEIS) |

|                        |                       |
|------------------------|-----------------------|
| Expected Approval Date | Expected Closing Date |
| 30-Nov-2021            | 30-Jun-2026           |
| Bank/IFC Collaboration |                       |
| No                     |                       |

### Proposed Development Objective(s)

To improve the learning environment in select schools under the Whole Day School (WDS) system and to strengthen the capacity of the Ministry of Science and Education to scale up the WDS system and implement sector reforms.



## The World Bank

CROATIA: TOWARDS SUSTAINABLE, EQUITABLE AND EFFICIENT EDUCATION PROJECT (SEE EDUCATION)  
(P170178)

### Components

| Component Name   | Cost (US\$, millions) |
|--|-----------------------|
| Component 1: Ensure that more hours translate into more student learning | 3.81                  |
| Component 2: Design and demonstrate infrastructure solutions for WDS     | 18.15                 |
| Component 3: Strengthen the Ministry's capacity to implement reforms     | 6.94                  |

### Organizations

|                      |                                   |
|----------------------|-----------------------------------|
| Borrower:            | Republic of Croatia               |
| Implementing Agency: | Ministry of Science and Education |

### PROJECT FINANCING DATA (US\$, Millions)

#### SUMMARY

|                    |       |
|--------------------|-------|
| Total Project Cost | 28.90 |
| Total Financing    | 28.90 |
| of which IBRD/IDA  | 28.90 |
| Financing Gap      | 0.00  |

#### DETAILS

##### World Bank Group Financing

|  |       |
|--|-------|
| International Bank for Reconstruction and Development (IBRD) | 28.90 |
|--|-------|

##### Expected Disbursements (in US\$, Millions)

| WB Fiscal Year | 2022 | 2023  | 2024  | 2025  | 2026  |
|----------------|------|-------|-------|-------|-------|
| Annual         | 6.54 | 8.60  | 7.26  | 6.05  | 0.45  |
| Cumulative     | 6.54 | 15.14 | 22.40 | 28.45 | 28.90 |

### INSTITUTIONAL DATA



## Practice Area (Lead)

Education

## Contributing Practice Areas

### Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

## SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

| Risk Category   | Rating        |
|---|---------------|
| 1. Political and Governance                                     | ● Moderate    |
| 2. Macroeconomic  | ● Moderate    |
| 3. Sector Strategies and Policies                               | ● Low         |
| 4. Technical Design of Project or Program                       | ● Moderate    |
| 5. Institutional Capacity for Implementation and Sustainability | ● Moderate    |
| 6. Fiduciary  | ● Moderate    |
| 7. Environment and Social                                       | ● Moderate    |
| 8. Stakeholders   | ● Substantial |
| 9. Other  | ● Moderate    |
| 10. Overall   | ● Moderate    |

## COMPLIANCE

### Policy

Does the project depart from the CPF in content or in other significant respects?

☐ Yes ☒ No

Does the project require any waivers of Bank policies?

☐ Yes ☒ No





## Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

| E & S Standards   | Relevance              |
|---|------------------------|
| Assessment and Management of Environmental and Social Risks and Impacts                       | Relevant               |
| Stakeholder Engagement and Information Disclosure   | Relevant               |
| Labor and Working Conditions  | Relevant               |
| Resource Efficiency and Pollution Prevention and Management                                   | Relevant               |
| Community Health and Safety   | Relevant               |
| Land Acquisition, Restrictions on Land Use and Involuntary Resettlement                       | Not Currently Relevant |
| Biodiversity Conservation and Sustainable Management of Living Natural Resources              | Relevant               |
| Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities | Not Currently Relevant |
| Cultural Heritage   | Relevant               |
| Financial Intermediaries  | Not Currently Relevant |

**NOTE:** For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

## Legal Covenants

### Sections and Description

Without limitation to the provisions of Article V of the General Conditions, and except as the Bank shall otherwise agree, the Borrower shall maintain at all times during the implementation of the Project, a Working Group, within MSE, with composition, resources, terms of reference and functions acceptable to the Bank, including, inter alia, an environmental specialist, social development specialist and a communication specialist.

### Sections and Description

The Borrower, through the Working Group, shall prepare and furnish to the Bank, not later than November 15 of each year during the implementation of the Project starting in 2022, a proposed Annual Work Plan and Budget for the next calendar year and provide the Bank a reasonable opportunity to exchange views.



| Conditions            |                              |   |
|-----------------------|------------------------------|---|
| Type<br>Effectiveness | Financing source<br>IBRD/IDA | Description<br>Developed and adopted a POM, satisfactory to the Bank.   |
| Type<br>Effectiveness | Financing source<br>IBRD/IDA | Description<br>Established the Working Group in a manner satisfactory to the Bank.  |
| Type<br>Disbursement  | Financing source<br>IBRD/IDA | Description<br>Notwithstanding the provisions of Part A (of Schedule 2: Section III in Loan Agreement), no withdrawal shall be made:<br><br>(a) for payments made prior to the Signature Date, except that withdrawals up to an aggregate amount not to exceed five million Euro (€5,000,000) may be made for payments made prior to this date but on or after one (1) year prior to the Signature Date, for Eligible Expenditures, subject to the Bank's prior approval of the conclusions of an environmental and social audit conducted by the Working Group of the activity or work proposed for financing; or<br>(b) under Category 2 until the Borrower has developed and adopted, to the Bank's satisfaction, the Small Grants Manual (separate section/chapter of the POM). |



## I. STRATEGIC CONTEXT

### A. Country Context

1. **After a deep recession triggered by the COVID-19 pandemic, the Croatian economy is on a recovery path in 2021.** A strong reliance on tourism has made Croatia highly vulnerable to adverse external shocks, such as the ongoing pandemic. The country also suffered from two devastating earthquakes, in March and December 2020. As a result, the gross domestic product (GDP) contracted by 8.0 percent in 2020. Fiscal support measures prevented a significant rise in unemployment and stronger social impact of the pandemic, but together with a decline in economic activity, led to a sharp deterioration of public finances and a surge in public debt. Poverty is also estimated to have increased, with low-wage earners being more affected by the crisis. However, the recovery started early, already in the second half of 2020, and has since accelerated significantly. This reflects robust foreign demand for domestic goods and services, particularly hospitality services, dynamic private investment, and increased consumption supported by a strong labor market. Unless the situation related to the pandemic significantly worsens, it is expected that real GDP growth in 2021 will reach 7.6 percent; strong and broad-based growth is expected to continue over the 2022-2023 period with real GDP likely to reach its pre-crisis level in 2022. At the same time, fiscal imbalances are likely to remain elevated over the 2021-2023 period with public debt falling to around 75 percent of GDP only in 2024.
2. **Without a significant increase in productivity, Croatia will not be able to reach growth rates that would allow the country to converge at a sufficient pace towards the income levels of its peers in the European Union (EU).** Total factor productivity made a negative contribution to growth during 2005–14 and only a small positive contribution during 2015–19.<sup>1</sup> This may partly mirror the excessive allocation of resources towards less productive sectors (i.e. tourism, retail, and construction), low levels of research and development activities, insufficient investment into human capital, a cumbersome business environment, and institutional and regulatory weaknesses. Croatia's public sector performance lags its EU peers across most governance indicators. Moreover, insufficient coordination and cooperation among agencies and levels of government impair policy coherence. The public sector is particularly weak at the local and regional level, where high fragmentation raises costs and reduces the quality, effectiveness, and sustainability of service delivery, including in the human development and infrastructure sectors.
3. **Croatia is also exposed to a range of natural hazards, including floods, droughts, wildfires, and earthquakes which can result in significant disruption of economic and social functions.** Between January 1996 and May 2020, 30 disasters related to natural hazards were recorded in Croatia.<sup>2</sup> Disaster risks are growing due to increasing urbanization and climate change as well as to land degradation caused by deforestation and overgrazing. Floods, extreme heat, droughts, and fires also occur often in Croatia, which are expected to be exacerbated by climate change impacts. In March 2014, excess rainfall led to widespread flooding in Croatia, Bosnia and Herzegovina, and Serbia, causing EUR340 billion in damage. In 2020 alone, the two earthquakes that struck Croatia led to fatalities, severe structural damage, and interruption in schooling. As an EU country, Croatia is following the long-term direction of the European Green Deal, seeking sustainable and low-emissions economy on the path to climate neutrality by 2050.

<sup>1</sup> European Commission estimates 2020.

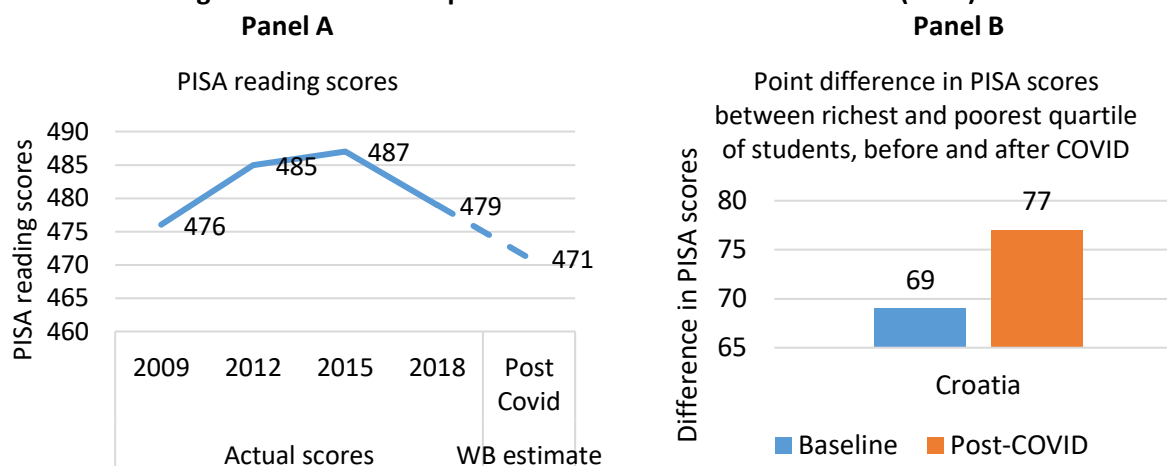
<sup>2</sup> EM-DAT, The international disasters database. Centre for Research on the Epidemiology of Disasters.



## B. Sectoral and Institutional Context

4. **Despite adequate spending, the performance of the education sector leaves room for improvement.** In 2019 (most recent publicly available data), Croatia spent 4.8 percent of its GDP on education (EU-27 average is 4.7 percent).<sup>3</sup> The share of total general government expenditure (10.2 percent) was also slightly above the EU-27 average of 10.0 percent. From 2017 to 2019, public spending on education rose by 10.8 percent, reflecting a rise in compensation for employees in the education sector. Despite adequate funding at or above EU-average levels, profound challenges and institutional issues remain at different levels of education in Croatia, particularly in the areas of equity and quality. The COVID-19 pandemic has exacerbated these structural challenges in the education sector.
5. **The COVID-19 pandemic is estimated to have generated substantial learning losses, especially for students from poorer households.** According to World Bank estimates in 2020, Croatia's reading scores as measured by the Programme for International Student Assessment (PISA) have likely fallen by 8 PISA points because of school closures (Figure 1, panel A). More disconcertingly, these learning losses are likely to have affected the poorest students the most (Figure 1, panel B). Parents of poorer students were less likely to step in and provide the support and help students would normally receive in school. As such, the World Bank estimates that the learning gap between rich and poor students has widened further since the COVID-19 crisis (from 69 points to 77 points, or nearly two academic years of schooling).<sup>4</sup> To mitigate these impacts and prevent potential future learning losses during school closures, it is important to secure adequate levels of instructional time for students, efficient models combining remote and face-to-face learning, and modern school spaces where students can maximize their learning potential.

**Figure 1: Estimated impact on PISA scores due to COVID-19 (2020)**



Source: World Bank 2020a.

Note: The World Bank has estimated the effects of COVID-19-related school closures on learning outcomes for 157 countries. Simulations use data on learning outcomes, years of schooling, and monthly wages to estimate the potential effects of school closures in general and across socioeconomic groups. For more information on the World Bank's work on COVID-19, see <https://www.worldbank.org/en/data/interactive/2020/03/24/world-bank-education-and-covid-19>.

<sup>3</sup> Eurostat 2021.

<sup>4</sup> These estimates are presented in more detail in World Bank (2020a). The estimates are based on several assumptions, including that: a student gains 40 PISA points of learning in a year, schools have been closed for around four months on average during the pandemic, and remote teaching in the country is half as effective as face-to-face teaching.



6. **Croatia has the lowest number of hours of instruction and the shortest duration of compulsory general education in the EU.** Compulsory education lasts eight years (the shortest in the EU) and, during those years, the number of hours of instruction is the lowest in the region. By the end of basic education, the average European student had received 4,062 hours of instruction, while in Croatia this figure is only 1,890.<sup>5</sup> The low instructional hours limit the impact schooling has on learning, especially for the most vulnerable students.
7. **Time spent in school is also unequal across income groups.** Children from the poorest households, on average, spend fewer hours in school than their richer peers. A quarter of primary school students from the lowest income quintile spends 5 hours or less in school per day; in contrast, close to 90 percent of students from rich backgrounds spend more than 5 hours in school, many of them with extracurricular activities. Instructional time is a key educational resource that countries use in different ways to enrich learning. Evidence suggests that both the time and quality of instruction have a positive effect on student learning, and this effect can be more relevant among disadvantaged students.<sup>6</sup> Increased instructional time and support can be particularly relevant among students with developmental disabilities.<sup>7</sup>
8. **Recognizing the challenges faced by the education sector, the Government introduced a comprehensive curriculum, the School for Life, which involves increased focus on modern teaching practices and building problem-solving skills among students.** The new curriculum was rolled out to all schools in the 2019/20 school year, after a year of piloting (and more than a decade of discussion). However, school founders (local governments) and principals have little experience and training to manage reforms in their schools and the teacher workforce is accustomed to the outdated curriculum. It is crucial to raise the capacity of teachers and principals and offer them greater support. While the newly rolled out School for Life curriculum reform is an important step in the right direction, schools and teachers need longer school days and greater support to make the most of the new curriculum.
9. **As part of a set of sweeping education reforms (see Box 1), the Government plans to introduce a Whole Day School (WDS) reform, which aims to improve student learning outcomes, particularly among disadvantaged students through increased instructional hours as well as improved teacher training and school infrastructure.** Introducing longer school days would ensure sufficient instructional time for students in grades 1-8 to fully benefit from the recently introduced curricular reform. As is common in other EU member countries, the Croatian WDS system will be composed of compulsory lessons and an optional part beyond mandated school hours that comprises extracurricular activities. The compulsory part of the WDS system includes two types of learning activities: regular instruction hours and other curriculum-related activities (i.e. time for homework, workshops, and organized play). The optional portion of the WDS system may include but are not limited to sports, music and arts, information technology, cultural activities, and foreign languages. Schools will define their offerings based on the interests of students and parents, the options available locally, and school preferences and capabilities. The WDS reform will allow for the expansion of instructional hours, while introducing WDS with

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<sup>5</sup> Eurydice 2019.

<sup>6</sup> Brown and Saks 1986; Cotton and Wikelund 1990; Grissmer et al. 2000, as cited in OECD 2012; Gromada and Shewbridge 2016; Llach, Adrogué, and Gigaglia 2009; Mazzarella 1984; Patall et al. 2010; Silva 2007.

<sup>7</sup> Children with minor developmental difficulties are normally included in mainstream classes and they are taught according to general curricula with the help of individualized plans or curricula adjusted to their capabilities. Children with major developmental difficulties are included in special programs in mainstream or special educational institutions (in case the children need additional health and social care).



continuous teacher training and systematic external evaluation of learning outcomes, which will especially benefit students from lower socioeconomic backgrounds. Additionally, the reform will identify cost-effective options for upgrading the physical environment of schools to enable the transition to single-shift teaching (see Annex 5 for more details about the WDS model).

10. **Although the low number of instructional hours is perhaps the most important structural challenge to improving student learning, extending the school day is complex.** Increasing instructional hours involves difficult discussions around adapting the curriculum and improving teachers' remuneration to cover for the additional hours. The challenge is compounded in Croatia where more than half of students are enrolled in double-shift schools, making a reform aiming to expand hours of instruction through a WDS intervention more complex. The problem of low instructional hours—and the challenges related to double shifts—have been widely recognized for at least a decade in Croatia. What has been missing is a plan to simultaneously expand instructional hours, while identifying cost-effective ways of moving away from double-shift schools nationwide.
11. **Moreover, the Ministry of Science and Education (MSE), school founders and principals face key capacity challenges to implement more complex education reforms.** There is insufficient capacity within the MSE, school founders, and principals in relation to planning, execution, and coordination: (i) key information is missing, including lack of timely data on student learning outcomes at key stages of the education cycle and low reliability and availability of key school data for strategic planning; (ii) poor incentives to focus on quality, equity, and efficiency (i.e., local actors have insufficient incentives to monitor and act on quality and equity, and are instead incentivized to maintain an inefficient model of delivering education in multiple shifts); (iii) absence of mechanisms to facilitate planning and execution of current and future reforms that will drive institutional change; (iv) low capacity of school principals who lack managerial experience and are disempowered to manage resources and lead schools; and (v) insufficient coordination among founders, schools, and the local community.
12. **Taking advantage of the possibility to mobilize EU resources, with the help of the World Bank, the Government has put forth an ambitious reform and investment plan for the education sector.** Specifically, the Croatian government will be able to use of the EU's multiannual Financial Framework (MFF) for the period 2021–27 and the Recovery and Resilience Facility (RRF). At the request of the Government, the World Bank has provided policy advice on the design of the WDS reform, which was used by the authorities to inform the strategic priorities of the National Recovery and Resilience Plan (NRRP). The NRRP contains credible, time-bound reforms and investments to be funded from the RRF. One of the most ambitious segments of the NRRP is dedicated to the education sector where, with the help of the World Bank, Croatia has put forth detailed plans to implement structural reforms across all education levels —pre-primary, primary, secondary, and higher education (Box 1). Croatia will also be able to use resources under the MFF over the medium term to ensure the sustainability of the WDS reform.
13. **The Croatian government would benefit from the Bank's support to design and implement the WDS reform in pilot schools as well as to strengthen the capacity of the MSE to scale up the WDS intervention and implement complex sectoral reforms.** This proposed project aims to introduce longer school days, ensuring sufficient instructional time for students to fully benefit from the recently introduced curricular reform. It proposes to support the Croatian government to design and implement the WDS reform in demonstration schools and strengthen the capacity of the Ministry through institutional building



activities. The project would also support the MSE to leverage additional EU resources to scale up the model nationwide.

**Box 1: Summary of necessary structural reforms in the education system as outlined in Croatia's National Recovery and Resilience Plan (NRRP) 2021-2026**

Croatia's NRRP includes an investment of around EUR900 million for the following reforms.

- **Early and preschool education.** The goal of the reform is to increase preschool participation for all children, especially those from low-socioeconomic backgrounds. To achieve this goal, the country will train 5,600 early childhood educators by 2030. In addition to meeting staffing requirements, the Government is planning to ensure the long-term financial sustainability of preschool institutions, especially in less developed areas. Thus, the Government will be involved in the development of a new financing model that will account for the fiscal capacities of founders and enable the sustainability of all new preschool programs. This measure contributes to the achievement of the EU2020 target of 95 percent of children between the age of four and starting primary school covered by preschool programs.
- **Primary and lower secondary education.** Implementation of the WDS reform at the level of primary and lower secondary education aims to increase the quality of teaching and learning outcomes of students, especially students from lower socioeconomic backgrounds, which will be enabled by increasing the number of compulsory classes and introducing WDS with continuous teacher training and systematic external evaluation of learning outcomes. Construction, upgrading, refurbishment and equipping of schools for single shift work and full-day teaching will also be part of the reform, which may result in a reorganizing of the school network. This measure contributes to the achievement of the EU2020 target that the share of 15-year-olds with insufficient skills in reading, mathematics, and science is below 15 percent. The proposed project will support the MSE's national roll-out of the WDS, which will also help mitigate some of the learning losses attributed to the COVID-19 pandemic with the expansion of instructional time; especially for students from low socioeconomic backgrounds, who have been disproportionately affected by the disruption in schooling.
- **Upper secondary education.** The goals of this reform include (i) higher rates of participation in general secondary education programs (gymnasiums), which should have a positive impact on the rate of completion of higher education, which is also low compared to the EU average; and (ii) optimization, rationalization, and adaptation of vocational education programs to the needs of the economy. The government is planning to achieve these goals through merging secondary education programs, which will increase their quality and ensure better compliance with the needs of local labor markets. Investments in quality infrastructure and human resources will also help achieve the stated goals. This measure contributes to the achievement of the EU2020 target that the employment rate of people aged 20-64 with qualifications is 82 percent.
- **Higher education.** The goals of the reform include (i) raising the accessibility, quality, and relevance of higher education and improving the normative framework; (ii) establishing qualification standards through a comprehensive Croatian Qualifications Framework Register; (iii) introducing an effective model of financing, teaching, and research based on reliable data from central records; and (iv) a comprehensive digital transformation of higher education, with infrastructural investments aimed at improving the learning environment. These goals will be achieved primarily through the adoption of the new Law on Scientific Activity and Higher Education and amendments to the Law on Quality Assurance in Science and Higher Education. The new normative framework will create the conditions for organizational and functional reform of public universities and other public higher education institutions, as well as funding aimed at achieving institutional development goals and priority areas. The new financing model for higher education is planned to be implemented through the program agreements that include scientific research and teaching activities of universities and other public higher education institutions. A prerequisite for the new funding model includes the establishment of a central data collection system for higher education. The Government is planning a comprehensive digital transformation of higher education in line with the Digital Education Action Plan.

Source: Croatia NRRP.





### C. Relevance to Higher-Level Objectives

14. **The FY2019–24 Country Partnership Framework (CPF)<sup>8</sup> features a highly selective World Bank Group (WBG) program targeted to the needs of a higher-income country.** Recognizing Croatia’s status as an EU member, WBG engagement is focused on supporting government institutions across sectors to better design and leverage EU financing. Moreover, any new IBRD lending is subject to specific selectivity criteria. This includes, first and foremost, that all new financing builds essential institutional capacity. The proposed education project meets this criterion as well as the following criteria outlined in the CPF: (i) provide innovative solutions that benefit the marginalized, bottom 40 percent, and vulnerable; (ii) leverage additional resources, including access to and efficient utilization of EU funds; and (iii) contribute to the regional and global public good. The proposed project was included in the envisioned IBRD operations during this CPF period.
15. **The Project fully meets the selectivity filters introduced in the CPF,** which allow WBG operations to address the main country constraints identified in the Systematic Country Diagnostic (Table 1).

**Table 1: Project’s contribution to CPF selectivity filters**

| CPF filter  | Project contribution   |
|---|--|
| Building institutional capacity   | Overall, institutional capacity building has been integrated into all aspects of the project based on lessons learned from other World Bank projects and international examples. The project is designed to help build MSE capacity to implement and monitor large-scale, complex education reforms (such as the introduction of a longer school day). To this end, the project includes a Project Development Objective (PDO) indicator focusing on increasing the institutional capacity of the MSE to implement education reforms. It will be tracked by asking the MSE to prepare and make public an annual progress report on reform implementation. The report will draw on new assessment data and beneficiary feedback that will be collected by the MSE and financed by the project. The project will also use the country’s procurement system (including green procurement criteria), and other management systems already in place to further strengthen capacity. |
| Providing innovative solutions that benefit the marginalized, bottom 40 percent, and vulnerable | The project focuses on improving equity and quality in basic education in several ways. First, the project will expand instructional hours in selected schools; global experience suggests such an expansion is likely to predominantly benefit the poorest students (because they tend to receive less academic support from their parents and outside tutors). Second, the project will provide grants to a pair of schools—one high performing and one low performing—to support the mentoring of principals in the below average performing school located in a high poverty area and enrolling many poor and Roma students. Third, the project will support the revision of the national regulations on students with special education needs. Fourth, young mothers and fathers of children attending WDS will find it easier to participate in the labor market, since school days will be better aligned with prevalent working hours.                                 |
| Contributing to regional and global public goods  | The project will help Croatia achieve its ambitious climate goals in several ways. It will assure that extensions and conversions of existing schools incorporate efficiency and climate-smart measures, and measures to respond to climate-related risks, based on best practice OECD-EU climate, environmental, and energy-efficient standards. Energy efficiency and mitigation measures related to climate change vulnerability, and incorporating seismic resilience into building upgrades, will be addressed in the legislation update and guidelines on how to build more resilient and efficient school buildings, suggesting better design choices not only in terms of pedagogy, but also in terms of building performance, energy savings, and response to climate change. The new legislation and   |

<sup>8</sup> The CPF (Report No. 130706) was discussed by the World Bank Board of Executive Directors on May 2, 2019.





|  |   |
|--|---|
|  | standards will then be applied to all school infrastructure financed through the RRF and other EU funding sources, contributing to the European Green Deal agenda.  |
| Leveraging additional resources, including access to and efficient utilization of European Union funds | Since October 2018, the World Bank has worked with the MSE to help prepare the large package of education reforms that Croatia presented to the EU as part of its NRRP. This work has involved preparing detailed costing scenarios for the reform, conducting a comparative analysis of the WDS system in several countries, preparing a communications diagnostic report, and supporting the Government in writing and making public a white paper on WDS. Thus, the Government has developed a EUR600 million flagship education reform program in their NRRP. Approximately EUR303 million for the implementation of WDS has been negotiated under the RRF and is scheduled to be spent by August 2026. The remaining costs are expected to be part of the European Regional Development Fund (ERDF) (in the funding period 2021–27). |

16. **The proposed project is also aligned with the National Strategy for Education, Science and Technology, and with the Croatian National Development Strategy 2030 (NDS),<sup>9</sup> which aims to impart transformational changes in basic education and which supports a flagship reform initiative in Croatia's EU-funded NRRP.** The project is directly aligned with the NDS's identification of the critical challenges in basic education and related policy recommendations, which include: (i) optimizing the school network to improve efficiency; (ii) allowing for increased instruction time; and (iii) prioritizing equity and quality-enhancing measures. The WDS reform is also closely aligned with the strategic framework for European cooperation in education and training (ET 2020), the European Commission's Country-Specific Recommendations for Croatia, and has been endorsed by the European Commission as part of the Croatian NRRP.
17. **The proposed project addresses a range of core principles for scaling up selectively for impact, articulated in the World Bank Group COVID-19 Crisis Response Approach Paper.<sup>10</sup>** These principles include: (a) fighting poverty and promoting shared prosperity; (b) sustainability; (c) inclusion; and (d) continued commitment to building human capital and preserving global public goods. The proposed project complements activities to support the educational system to deliver learning during the COVID-19 pandemic. This project substantively contributes to Pillar 2 of the approach, "protecting the poor and vulnerable," and to Pillar 4, "strengthened policies, institutions and investments for rebuilding better...by resilient, inclusive and sustainable recovery," through the actions described above in Table 1.

## II. PROJECT DESCRIPTION

### A. Project Development Objective

#### 18. PDO Statement

The PDO is to improve the learning environment in select schools under the Whole Day School (WDS)

<sup>9</sup> In December 2017, Croatia introduced the Law on Strategic Planning and Development Management, which regulates the new system of strategic planning. The Ministry of Regional Development and EU Funds launched in 2018 the challenging assignment of operationalizing a new strategic planning system and coordinating the preparation of the NDS. The 2030 NDS is the overarching document aimed at providing strategic guidance to all development policies and lower-ranking strategic planning documents. In this context, the Government requested the World Bank to support this task.

<sup>10</sup> World Bank 2020c.



system and to strengthen the capacity of the Ministry of Science and Education to scale up the WDS system and implement sector reforms.

Learning environment is defined as the pedagogical model, competencies of teachers and principals, and the physical environment in schools.

#### 19. PDO Level Indicators<sup>11</sup>

Improved learning environment will be measured by:

1. Students benefiting from the WDS pedagogical model (Number)
2. Teachers in WDS demonstration schools receiving training from learning counselors (Number)
3. Schools with improved physical environment according to WDS standards (Number)

Strengthened capacity of the Ministry of Science and Education to scale up the WDS system and implement sector reforms will be measured by:

4. MSE staff and school founders preparing cost-effective school network plans to scale up the WDS system (Text)
5. MSE staff participating in training on designing and implementing reforms (Percentage)

#### B. Project Components and Costing

20. The proposed project will consist of three components with a total cost of EUR25 million (equivalent to US\$28.9 million). Below is a detailed description of each component and associated costs.

##### **Component 1: Ensure that more hours translate into more student learning (EUR3.3 million, equivalent to US\$3.81 million)**

21. This component will support the MSE to design, implement, and monitor the WDS system while learning from its rollout to inform the MSE's future scale up of the reform. Activities to be financed will consist of developing the WDS system, including detailing its key features, such as organization of the new extended school day (that is aligned with the new curriculum and ensures more time on task), designing the new pedagogical model, training for learning counselors, and a peer mentoring program for principals, among others. This component will also, based on international research, identify best practices to improve learning outcomes among disadvantaged students.

##### Subcomponent 1.1: Develop the WDS system and refine the system following experience during the initial years of reform (EUR2 million, equivalent to US\$2.31 million)

22. The objective of this subcomponent is to support the MSE in designing the WDS system for basic education (grades 1–8). This subcomponent will finance technical assistance to support the development of the WDS system and its adjustment following experience during the initial years of implementation by, *inter alia*, (i) developing guidelines to increase learning time for all students and incorporate additional

<sup>11</sup> A full description of the protocols for evaluating the PDO indicators will be included in the Project Operations Manual. The protocols provide a detailed process and institutional responsibilities for measuring and reporting on the PDO indicators.



extracurricular activities; (ii) defining pedagogical practices consistent with the new curriculum; (iii) designing training models for teachers; and (iv) contracting professors and experts from higher education institutions as learning counselors to train teachers in WDS implementation.<sup>12</sup> The WDS pedagogical model will be based on increased learning time (more time on task, including math, science and language and extracurricular activities), additional support to students that are lagging, and alignment of the new curriculum with the contemporary pedagogical practices. Details for measuring the improvements in the pedagogical model will be explained in the Project Operations Manual (POM) and will largely pertain to the completion of the following activities: implementation of operational guidelines for increasing learning time; introduction of a program to support lagging students; implementation of new structure of instruction hours for subjects and extracurricular activities; and implementation of the new curriculum within the context of extra hours per day. A central outcome of this subcomponent will be the lessons learned by the MSE and its partners during the initial stages of program implementation. These lessons will be based on the indicators and feedback from stakeholders (students, teachers, parents, school principals, and others) and will allow for a continuous improvement in the implementation of the WDS system.

23. This subcomponent will also support the (i) design and establishment of a “peer-mentoring” program that would pair principals from demonstration schools with poor academic performance (and located in high poverty areas), with principals from top-performing schools; and (ii) provision of Small Grants to eligible demonstration schools participating in the “peer-mentoring” program, as set forth under the Small Grants Manual, to procure, *inter alia*, learning materials, minor information technology equipment for classrooms, and trainings for teachers.<sup>13</sup> Though information technology equipment for classrooms and trainings for teachers will be minor in scope, these investments will promote climate change mitigation efforts by prioritizing and using energy efficient equipment.

Subcomponent 1.2: Help utilize administrative and student performance data to improve student learning (EUR1.3 million, equivalent to US\$1.5 million)

24. This subcomponent will contribute to the design and development of an advanced education database, utilizing administrative and student performance data by education sector stakeholders. This subcomponent will strengthen key areas of the education data policies that will be used by all education stakeholders, including teachers, parents, principals, and students. Key data will be obtained by the Croatian National Center for External Evaluation of Education, which will implement national external exams and conduct evaluations of the learning outcomes derived from the implementation of the WDS system.

**Component 2: Design and demonstrate infrastructure solutions for WDS (EUR15.7 million, equivalent to US\$18.15 million)**

25. This component will support the design of new infrastructure standards for Croatian schools, which will

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<sup>12</sup> This program draws inspiration from Croatia’s own experience hiring mentors to support teachers during the initial years of implementing the curriculum reform, and from Denmark’s program of hiring “learning consultants” as part of a recent reform of the basic education system (including extending instructional hours) (VIVE Education and Danish Ministry of Education 2019).

<sup>13</sup> The program is based on successful models from the UK that spread to many countries around the world (see Hill and Matthews 2010).



address climate vulnerabilities, incorporate seismic resilience into building upgrades, and encompass best OECD-EU climate, environment, and energy-efficient standards, significantly contributing to the European Green Deal agenda. The component will also finance minor infrastructure investments in a selected group of schools already operating under a single shift (approximately 50 schools). Selected schools will pioneer the implementation of WDS and serve as demonstration schools for the reform. No new schools will be built under this project.

Subcomponent 2.1: Prepare new infrastructure standards for schools (EUR0.3 million, equivalent to US\$0.35 million)

26. This subcomponent will provide technical assistance to the MSE to transition schools into modern, climate-resilient and energy-efficient facilities by, *inter alia*: (i) adopting school infrastructure designs and standards following best international and European practices, as set forth in the POM; (ii) developing guidelines to support national and subnational authorities in procurement, permits, and supervision; (iii) gathering data on existing infrastructure to inform prioritization of capital investments; (iv) carrying out preliminary analytical studies such as technical surveys and energy audits; and (v) developing learning and knowledge exchange mechanisms to exchange best practices and foster peer-to-peer learning around novel ways of using learning spaces. The project will support the development of new infrastructure standards and quality planning with greater energy efficiency and better resilience to climate-induced hazards (considering, *inter alia*, compact typologies, not only reducing total surface area and thus the direct impact on land, but also requiring less material and less transport, creating less overall pollution and GHG emissions and resulting in lower rehabilitation and maintenance costs). The new infrastructure standards for schools will follow the best OECD-EU practices for climate resilience, including the EU Strategy on Adaptation to Climate Change and associated technical standards.

Subcomponent 2.2: Creating “demonstration schools” (EUR15.4 million, equivalent to US\$17.8 million)

27. This subcomponent will finance support of minor infrastructure investments in a select group of schools pioneering the implementation of the WDS system and serving as demonstration schools for the reform by, *inter alia*: (i) selecting demonstration schools through a public call, (ii) carrying out minor infrastructure investments (such as minor rehabilitation and refurbishment work) to demonstration schools, and (iii) procuring necessary school furniture and equipment for demonstration schools to facilitate their participation in WDS. The demonstration schools (approximately 50 schools) will implement the WDS system over the span of the project and inform the scale-up of the WDS system throughout the country. The project will include efforts to adapt school infrastructure to be more resilient to climate-induced hazards through climate-proof design and planning. Basic infrastructure investments will be made in accordance with the EU norms for climate mitigation and adaptation (including, among others, energy efficient equipment and appliances for lighting, heating of facilities, and producing sanitary hot water, drainage improvement for flood control, proper facade materials, and insulation measures to adapt to extreme temperatures).
28. The demonstration schools will be selected by the MSE through a competitive “public call” process. To test the WDS system before the MSE can scale up the reform at the national level, only primary schools already operating under a single shift will be eligible to participate as demonstration schools. Other eligibility conditions will include, most likely: i) consent from the School Board; ii) consent from the school founder; iii) consent from the Parents' Council. Given the monetary incentives provided to schools through



the project, it is expected that a satisfactory number of eligible schools will apply to become demonstration schools. The selection criteria will be based on the following: i) the school's fulfillment of necessary preconditions to quickly and more easily implement the WDS system (i.e., already operate in a single shift and have the infrastructure to accommodate the activities of the longer school day with minimum enhancements, and have adequate outdoor spaces for break time/play); ii) size of the school; iii) geographical representation; iv) even distribution in urban and rural areas; and v) and equity consideration (inclusion of schools from poor geographical areas). Extensions and conversions of existing schools will incorporate energy efficiency and integrate safety into education infrastructure, and the project will promote school-based disaster management in a way that reduces the greatest amount of risk while applying principles of investment efficiency. Further details on selection criteria and due diligence processes will be described in the POM.

**Component 3: Strengthen MSE's capacity to implement reforms (EUR6 million, equivalent to US\$6.94 million)**

29. Component 3 will strengthen the MSE's capacity and provide direct support to key aspects of implementing the reform, such as establishing a Working Group within the Ministry, project management, monitoring and evaluation, and communications. Technical assistance and capacity-building are at the center of this component's activities, which aim to strengthen the MSE's ability to lead the design and implementation of the WDS reform. Additionally, the component will support the MSE to design and implement other education initiatives supported in the NRRP. The component will also support seminars, trainings, and knowledge sharing events to support the reform and address climate change in the context of the educational sector.

**Subcomponent 3.1: Support establishment of the Working Group (EUR2.7 million, equivalent to US\$3.12 million)**

30. This subcomponent will finance support for the implementation of the WDS system, including by: (i) strengthening the MSE's capacity to support key aspects of implementing the reform, including the establishment of the Working Group; and (ii) support to the Working Group in the overall day-to-day implementation of the Project, including procurement, financial management, monitoring and evaluation, carrying out of audits, communication and outreach strategy on the WDS, safeguards and implementation of grievance redress mechanisms. The Working Group will serve as the Project Implementation Unit (PIU) within the MSE and will consist of *inter alia* (i) a Working Group project manager to be hired by MSE; (ii) three specialists for various reform efforts (pre-primary, primary and secondary) that will also be responsible for the monitoring and evaluation of the project and incorporating lessons learned in the project; (iii) two specialists to be appointed among MSE's civil servants with adequate competence in procurement and in financial management; (iv) two specialists to be appointed among MSE's civil servants with adequate competence in environment and social development; and (v) one communication specialist to be hired by MSE. The MSE will lead and coordinate the implementation of the project under the overall guidance of the MSE's management team. The Working Group in cooperation with the General Secretariat will be responsible for the preparation and implementation of the procurement of school infrastructure and equipment, and related activities, including financial management, disbursement, procurement, application of environmental and social policies, and reporting. Capacity enhancement of the MSE will be financed by the project to maintain, throughout project implementation, qualified Working Group staff in sufficient numbers, as well as adequate funds, facilities, services, and other resources for project



implementation (including, procurement, financial management, environmental and social aspects, and monitoring and evaluation), all acceptable to the Bank.

31. This unit will also support (i) the design and implementation of other strategic reform initiatives of the MSE outlined in the NRRP, thereby strengthening the internal capacities of the MSE; and (ii) development of an effective communication and outreach strategy to inform and engage with all stakeholders and the community at large about the comprehensive WDS reform (the project will finance technical assistance and the production and distribution of communications materials associated with WDS and an advisory panel formed of members of the Working Group, school founders/boards, teacher association, and parent associations, to help refine or “test” communication strategies, trouble shoot, and craft the right messages and ways to communicate them to the different audiences).

Subcomponent 3.2: Update the costing of the WDS, revise national regulations, and prepare local school network plans (EUR0.8 million, equivalent to US\$0.92 million)

32. This subcomponent will provide technical assistance, training and capacity-building to support the MSE in the design, implementation and scale up of the WDS system, by *inter alia* (i) reviewing national regulations governing teachers, students with special needs, school autonomy, and organization of school day; (ii) reviewing the framework for human resources in the school sector; (iii) revising the WDS reform costing to ensure consistency with education policy reforms; (iv) conducting a needs assessment and training on school management; and (v) supporting local governments to adapt their local school network and promote their participation in the WDS system. The project will also support targeted technical assistance and research for fostering climate action in the education system, so that the national regulations are updated ensuring more energy efficient and climate resilient school buildings, suggesting better choices not only in terms of pedagogy and environmental literacy but also regarding climate change. By doing this the project will ultimately contribute to climate adaptation and mitigation over the long term, in terms of supporting energy savings and GHG emissions reductions, and climate resilience by incorporating climate, environment, energy-efficiency standards and seismic resilience into building upgrades in line with the best OECD-EU practices.

Subcomponent 3.3: Support the design of other educational strategic reform initiatives (EUR0.7 million, equivalent to US\$0.81 million)

33. The objective of this subcomponent is to provide technical assistance to support the MSE with the design of educational reforms beyond the WDS set forth under the NRRP, that seek to *inter alia*, (i) restructure the early childhood development financing model and enhance capacities of preschool teachers; (ii) optimize and adapt the vocational education school network to align with the needs of the economy and increase participation in general education programs; and (iii) restructure the higher education financing model and enhance the digital competencies of professors.

Subcomponent 3.4: Fund a research program to document results (EUR1.8 million, equivalent to US\$2.08 million)

34. The objective of this subcomponent is to support the establishment of a research program to monitor and analyze the impact of the WDS reform, including by conducting an impact evaluation of outcomes in Demonstration Schools vis-à-vis a statistically valid group of “control schools”, as set forth in the POM, to





(i) compare differences in average student learning outcomes and learning outcomes among disadvantaged students; (ii) inform future reform activities in a timely and evidence-based manner; and (iii) leverage the expertise of other national educational institutions for the benefit of students and teachers. The impact evaluation will monitor 3 cohorts (those in grades 1, 5, and 7 at the start of the reform – i.e., when demonstration schools start WDS in the school year 2022/23) and track their progress throughout the project period, both for the “demonstration” and “control group” schools. Assessments early in the project will be introduced as baseline information, followed by end of year 3 of the project (June 2024) and end of year 5 of the project (June 2026): this will help demonstrate the positive effects of the WDS reform and motivate other schools to support the reform facilitating the scaling up of the reform. Overall, the impact evaluation will measure basic linguistic (Croatian language), numerical literacy and science-related subjects depending on the grade being tested. Data from parental labor force status will also be collected as part of the impact evaluation. Additionally, the National Center for External Evaluation of Education (NCVVO) plans to conduct a series of surveys to measure socioeconomic status, well-being, student satisfaction and motivation to monitor the progress of the project.

**35. In addition, the following corporate priorities are embedded in the project interventions:**

**a) Gender.**

Croatia has one of the lowest female employment rates in the EU (51.5 percent compared to the EU average of 60.4 percent), with an 8.5 percentage point difference compared to that of men. Thirty-two percent of women aged 25–64 are inactive and not seeking employment due to care responsibilities, compared to only 6.7 percent of men. The economic analysis shows that once the WDS model is deployed across the whole education system by 2026, it will be associated with a significant increase in earnings for child caregivers. For example, based on analysis of labor force participation data for women with children ages 6–14, it is estimated that the WDS reform will generate a 6 percent increase in paid work for mothers not working and with children attending schools five hours or less, compared to prior to the reform. It will also generate positive employment gains for both young fathers and mothers. Moreover, we project positive labor gains also for young fathers<sup>14</sup> as studies suggest that young men who have children at early ages are just as vulnerable as young women who have children at early ages and are as disadvantaged in terms of socioeconomic background and school achievement.<sup>15</sup>

Thus, due to the introduction of the WDS model, both young mothers and fathers of children attending WDS will find it easier to participate in the labor market, since school days will be better aligned with prevalent working hours. Consequently, this will have positive labor outcomes on two fronts: a decrease in the labor participation gender gap and higher overall labor participation (with low-income households benefiting the most). The Results Framework includes an intermediate indicator that will track the labor supply of mothers whose children benefit from WDS, conducted through specific targeted surveys (measuring hours willing to work per day and hours of childcare per day).

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<sup>14</sup> The share of youth not in education, employment, or training is above the EU average for both females and males (12.1 percent and 11.4 percent, respectively). World Bank Development Indicators, 2019 data; <https://data.worldbank.org/indicator/SL.UEM.NEET.FE.ZS>; <https://data.worldbank.org/indicator/SL.UEM.NEET.MA.ZS>.

<sup>15</sup> Weinshenker 2015.



*Improving educational outcomes for Roma girls, and boys.* Roma girls have much lower rates of upper secondary education completion than their non-Roma peers: a mere 6 percent of the female Roma population complete this level, compared to 24 percent of Roma males. This is in contrast with approximately 83 percent of the non-Roma population.<sup>16</sup> These structural inequalities are already entrenched at the primary education level, which only about 30 percent of Roma girls complete. In line with academic research, we expect that more instruction time and remediation strategies in the WDS pedagogical model will contribute to equalizing the chances for Roma girls as members of those with a less advantaged socioeconomic background. At the same time, in Croatia, male students lag their female counterparts in terms of completion rates and performance. Therefore, the project will enable vulnerable Roma girls and boys to benefit from longer instruction time, more school resources, and timely assessments.

**b) Climate Change and Co-benefits.**

The environment and climate change are important factors that should be considered in the rehabilitation of school infrastructure. There are several climate-related risks in Croatia especially connected with meteorological hazards and disasters—mostly floods, extreme temperatures, and wind. The project will assure that extensions and conversions of existing schools comply with natural hazards regulations and incorporate climate-smart and resilience measures and measures to respond to climate-related risks. Regarding the extreme temperatures and wind (especially in the coastal area), proper insulation thickness and selection of the facade material should be chosen, along with the proper shading of the building, solar panels, landscape arrangement, and building orientation, together with compact typology that reduces the quantity of the surfaces that can get overheated, which increases energy efficiency to maximize climate co-benefits.

Additional contributions to climate co-benefits will be presented through updated national guidelines on how to build more efficient and resilient school buildings, suggesting better design choices not only in terms of pedagogy, but also in terms of energy savings, building performance, incorporating climate, environment, energy-efficiency standards and seismic resilience into building upgrades. Quality planning, especially with compact typologies, would not only reduce total surface and thus the direct impact on the land, but would also require less material and less transport, would create less overall pollution and GHG emissions and, later, result in lower rehabilitation and maintenance costs. The project will encompass best practice OECD-EU climate, environment, and energy-efficient standards, and assure that extensions and conversions of existing schools incorporate energy efficiency and integrate safety into education infrastructure, as well as promote school-based disaster management in a way that reduces the greatest amount of risk while applying principles of investment efficiency.

**c) Stakeholder and Citizen Engagement.**

As a part of project preparation, the Bank and MSE teams have conducted in-depth consultations with key stakeholders, including school founders, teachers, school principals, representatives of regional development agencies and the public. The initial consultations informed the stakeholders about the

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<sup>16</sup> <https://www.statista.com/statistics/434854/croatia-adults-with-upper-secondary-or-tertiary-education-attainment/>





WDS reform as a continuation of efforts by the MSE aimed at improving the quality of the education system. The findings and feedback from these stakeholders have been used to inform project design.

A Stakeholder Engagement Plan (SEP) has been developed, which includes a public outreach plan and specificities of the stakeholder consultations with all relevant parties, among which are: primary school teachers, educators, academia, teachers' unions, students (including students with disabilities), parents, interested parties, and the Croatian public. The experience in public outreach and stakeholder consultation that the MSE gained through implementation of the curriculum reform that is currently underway informed the stakeholder mapping and analysis

Locations for the implementation of the first phase of the WDS reform will be decided following calls for proposals to schools. Schools will apply voluntarily and will be required to demonstrate approval of key stakeholders. In addition, the project will provide continuous engagement with the schools that will implement WDS in the second phase (nationwide) as outlined in the Communication Strategy of the reform.

The MSE will engage with stakeholders throughout the project life cycle, commencing such engagement as early as possible and in a time frame that enables meaningful consultations. Beneficiary and stakeholder participation in project monitoring activities through surveys or other appropriate community engagement mechanisms will be conducted periodically by the MSE. This exercise could serve as one of the key monitoring and evaluation mechanisms used by the MSE to assess high-quality service delivery of education.

#### *Disadvantaged/Vulnerable Groups*

The project will pay due attention to inclusion of children with special needs and their parents, as well as children from socially vulnerable groups and their parents. Measures will be put in place to ensure safe and meaningful participation of these groups in consultations, free of coercion and duress. Impact evaluation to be conducted in demonstration schools will also look at inclusion of children with special needs.

#### *Stakeholder Engagement Disclosure*

The project's draft ESMF, which includes Labor Management Procedure, and the SEP were disclosed prior to appraisal on MSE web site on July 14, 2021.

### **C. Project Beneficiaries**

36. The proposed project activities will directly benefit an estimated 50 demonstration schools in which WDS will be implemented. Consequently, the number of students directly benefiting from the project will be approximately 32,500, including an estimated 20 percent of students from disadvantaged backgrounds who will benefit from subsidized school meals, extended instruction time and extracurricular activities, and timely assessments. Additional direct beneficiaries include approximately 2,000 grade 1–8 teachers and principals who will benefit from enhanced professional development trainings that emphasize the use of effective teaching practices and formative assessment strategies. MSE will also directly benefit from the capacity-building activities focused on reform design and implementation envisaged under the



project, and from the establishment of the Working Group. Indirect beneficiaries include households (especially mothers) that will be better able to participate in the labor market due to the expansion of the school day, hence increasing their disposable income and reducing their exposure to poverty risk. Finally, employers and society will benefit from increased human capital, and from higher labor force participation and productivity.

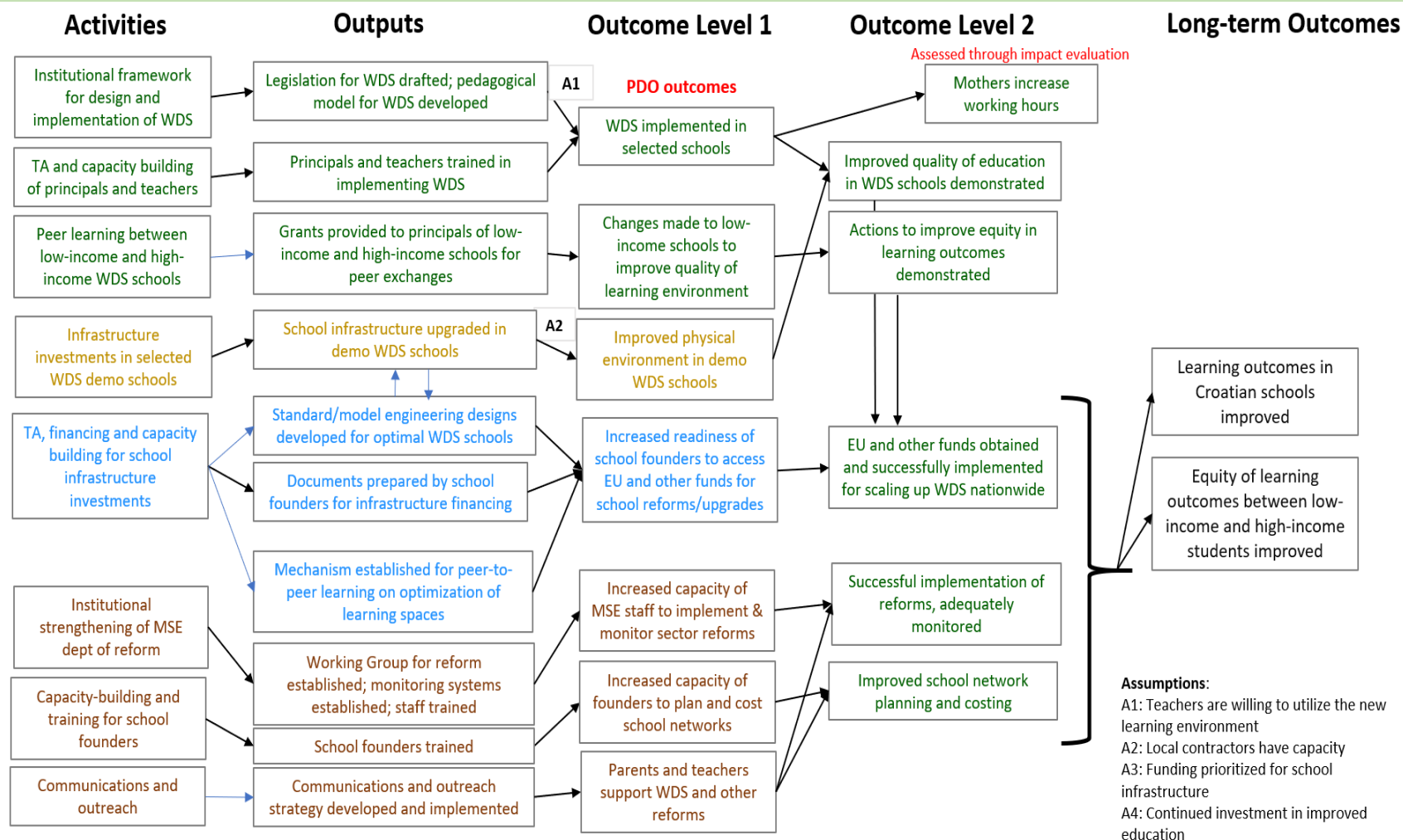
#### **D. Results Chain**

37. The proposed project's results chain is presented in Figure 2. To realize the long-term goals of improved equity and quality through a better learning environment and improved capacity of the MSE to implement education reforms, the first step will be the successful rollout of the WDS reform in selected schools, which this project supports. Project activities related to improving the learning environment will contribute to more learning time in schools through an improved pedagogical model, adjustments to the physical environment, and better trained teachers and principals. The project's support of the MSE to design the WDS will also enable the roll-out of the WDS throughout the entire education system in subsequent years.



**Figure 2: Results chain**

The PDO is to improve the learning environment in select schools under the Whole Day School (WDS) system and to strengthen the capacity of the Ministry of Science and Education to scale up the WDS system and implement sector reforms.





## **E. Rationale for Bank Involvement and Role of Partners**

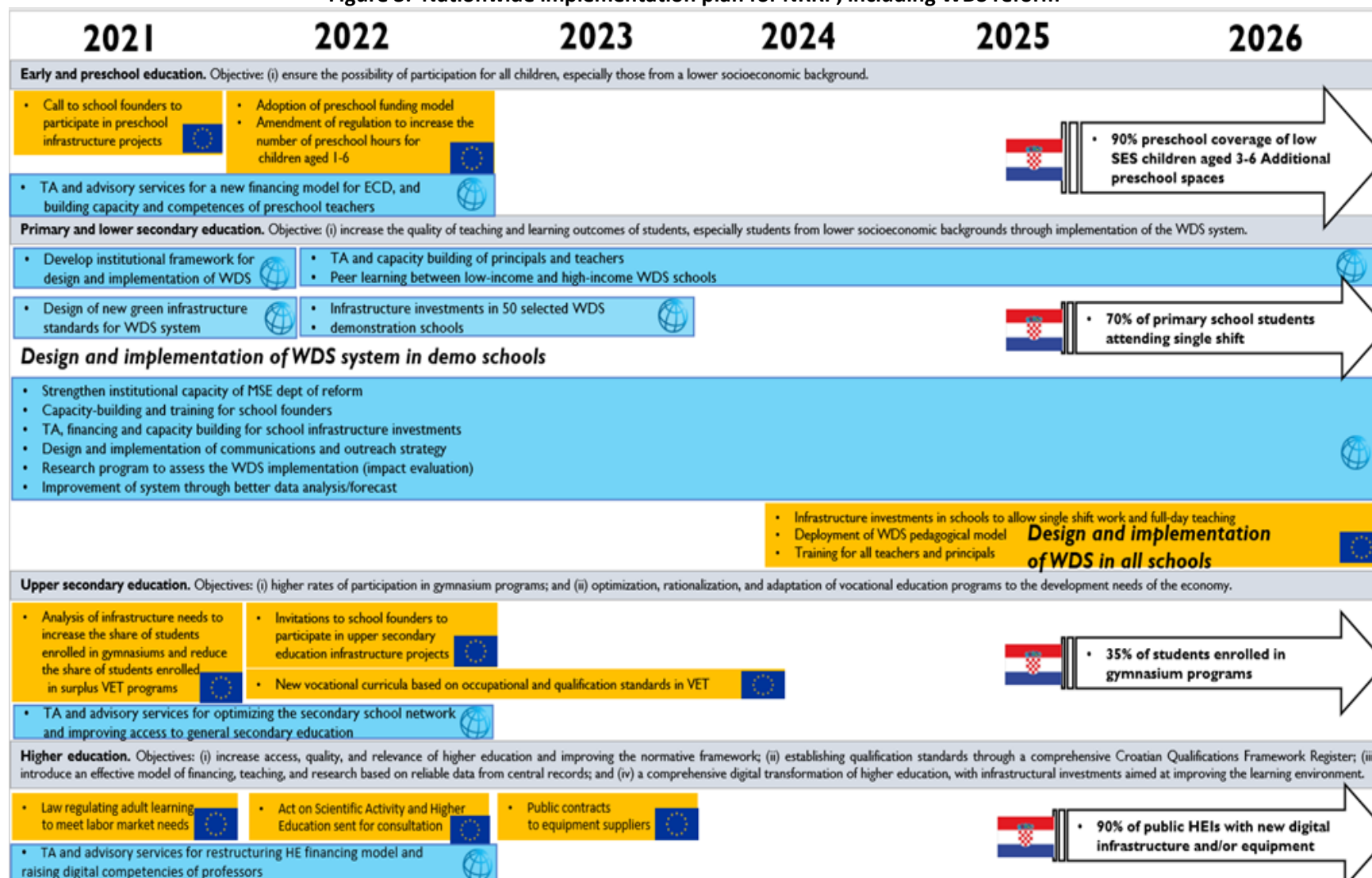
38. Over the past two years, the World Bank team has worked with the MSE to help prepare the flagship WDS reform for Croatia. This project will support this major government program aimed at solving institutional weaknesses while at the same time embarking on a major shift towards more instructional time and better quality of learning. The project will facilitate the transition of the education system away from an outdated and inefficient multiple-shift model to a single-shift model, complemented by an improved learning environment. The project will address institutional weaknesses related to management capacity of the school network, both at the central level and the level of school founders and will strengthen the system's capacity to deliver more efficient services through better planning and resource management. Moreover, by enabling the strategic use of information and data, the project will help improve decision making at the central and local level, resulting in better use of public funds.
39. Successful implementation of the proposed project will be key to scaling up the reform to the rest of the country. The project will help implement the WDS model in demonstration schools by providing both technical assistance and the necessary essential infrastructure. Lessons learned from the pilot, including on training needs and methods, the new administrative procedures and school selection processes, will be critical for the comprehensive implementation of the reform. The learning acquired and the capacity built as a result of these efforts will be supplemented by nearly EUR600 million (EUR300 million secured from the EU's Recovery and Resilience Facility (RRF) and the remainder expected to be secured by cohesion funds under the 2021-27 programming period) that will enable the WDS model to be scaled up to the national level in a sustainable manner (Figure 3).
40. The Bank has unique experience in implementing complex reforms in the education sector in similar settings, and commands in-depth knowledge about critical elements of WDS reform, including school optimization, use of data for better educational outcomes, strengthening equity for children, and advanced design of learning spaces. It is also a long-standing and trusted partner of choice for the government and the MSE in helping chart the vision for the sector.
41. The World Bank IPF project will help design the WDS reform and implement it in a select number of schools, ensuring a demonstration effect to be replicated and scaled up nationally with the use of EU funding. With a relatively small and carefully targeted investment project (EUR 25 million), the World Bank will enable utilization of much bigger EU funding (EUR600 million) at a scale that can have a truly transformative effect on Croatia's education sector and on the society.
42. The project generates knowledge and experience valuable beyond Croatia. First, countries around the globe are considering expanding instructional time to improve learning. But, to date, there is little rigorous evidence to document the impact such expansion has on learning. This project will help fill this gap by embedding an impact evaluation in its design. Second, a substantial portion of schools in many (especially low-income) countries operate in double shifts but aspire to identify cost-effective options to transition to single-shift schools. Through the technical assistance that will be provided to the MSE to develop a school network consolidation plan to scale up the WDS reform nationally, this project will generate invaluable experience on how to orchestrate such a transition.
43. This project will build on the Bank's previous and current engagements in the education sector in Croatia.



This proposed project will advance the work on school optimization initiated by the previous project, such as reduction of the number of schools operating in multiple shifts (Loan no. 73320-HR, 2006–2011). It will also leverage the learnings from the recent National Development Strategy Reimbursable Advisory Services (RAS), which has produced a detailed note on the state of the education system in Croatia, and on the regional RAS underway in Slavonia, focused on growth and jobs, which has an important education component. By focusing on basic education, the project will complement previous World Bank-supported work in higher education, carried out through an Analytical and Advisory Services and a RAS since 2011 that focused on, among other topics, improving the financing of higher education. Over the past two years the Bank has been involved in close discussions and cooperation with the European Commission in order to leverage the necessary resources for scaling up the WDS system nationwide.



**Figure 3: Nationwide implementation plan for NRRP, including WDS reform**





## F. Lessons Learned and Reflected in the Project Design

44. The proposed project design incorporates key lessons learned from existing research, and from international best practices from previous World Bank-supported education operations, and from the MSE's own recent reform experiences. These lessons are discussed below.

### *Lessons on equity and longer instructional hours*

45. **According to expert literature, students from disadvantaged backgrounds and other students who require more time to learn and/or are falling behind usually reap the greatest benefits from increased instruction time.**<sup>17</sup> In Croatia, wealthier students often receive private tutoring to complement their school-based education, which students from a lower socioeconomic background cannot afford. The project aims to level the playing field by giving these students more opportunities to learn while in school, without the need for non-formal approaches. Studies show that students from disadvantaged backgrounds often lack access to extracurricular and enrichment activities, such as foreign languages, sports, and the arts, which will become integral to Croatian education with the new WDS system.
46. **Effective use of the increased instruction hours is critical.** The literature consistently points out that the way teachers use additional hours of instruction is key to improved outcomes. Support to teachers and schools so that students have more and better time on task is fully integrated into the project design, through classroom observations, training, mentoring, coaching, greater use of formative assessments, and monitoring. For example, institutional capacity to monitor the effective use of the increased instruction hours is critical to determine the value added of extended hours. A World Bank project in Uruguay<sup>18</sup> suggests that close monitoring of the use of extended time across schools is required to regulate the use of extended time. Monitoring, which will be an integral part of the project, can help administrators learn about the optimal use of extended instruction hours and offer support to make changes quickly for better project implementation and greater learning results. In addition, capacity building among teachers and principals to improve their understanding and application of the effective use of instructional time is critical for effective use of the increased instruction hours.

### *Lessons on reducing inefficiencies*

47. **Across the ECA region, education systems have struggled to merge classes, close schools, and downsize their teacher workforce to address high costs per student and mitigate demographic challenges due to the falling fertility rates and plummeting student numbers.** This project draws on the lessons of multiple reform efforts to provide the MSE with technical assistance under Component 3 to develop a school network consolidation plan—many of which were supported by World Bank projects—over the past two decades. These include the case of Bulgaria and Moldova, which experienced the largest declines in student numbers in the Europe and Central Asia region. In summary, these experiences suggest four things: (i) the politics involved in addressing inefficiencies (that is, downsizing the school network) are formidable and pertain to teaching jobs and parents' access to a nearby school building; (ii) having a funding system where money follows inputs (that is, teachers and classes), not students, provides poor

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<sup>17</sup> Brown and Saks 1986; Cotton and Wikelund 1990; Grissmer et al. 2000, as cited in OECD 2012; Gromada and Shewbridge 2016; Llach, Adrogué and Gigaglia 2009; Mazzarella 1984; Patall et al. 2010; and Silva 2007.

<sup>18</sup> The Support to Uruguayan Public Schools Project.





incentives for local authorities to act in response to falling student numbers<sup>19</sup>; (iii) the highly centralized systems of Eastern Europe—emphasizing compliance with detailed norms—also provide a poor environment in which to downsize as local actors are disempowered from devising local solutions that could help provide more cost-effective results; (iv) given the complexities and the difficult politics involved, making progress requires political leadership from the entire government, not just the MSE. Drawing on these lessons, the project will support the MSE in using the large-scale infrastructure investments financed by the EU to incentivize local actors to downsize their network and introduce a governance structure that places more emphasis on results (not detailed norms) and provides more flexibility and autonomy to local actors.

#### *Lessons on improving the physical learning environment*

- 48. Improvements in the physical learning environment could help enhance student attitudes and behaviors and learning outcomes in the long run.** Evidence shows that the physical characteristics of learning spaces have a significant impact on educational progress. The impact has been estimated to explain on the order of 16 percent of the variation in pupils' learning (Barrett et al. 2015a). Moreover, Glewwe et al. (2011) conducted a literature review followed by a meta-analysis study of the relationship between school resources and student test scores. Better resources such as textbooks, basic furniture, blackboards, school libraries and better infrastructure were found to have a positive impact on test scores. The authors concluded that a fully functional school—one with better-quality roofs, walls or floors, with desks, tables and chairs and with a school library—appears to be conducive to student learning. Branham (2004) studied over 200 schools in the Houston Independent School District in the United States and found that the quality of school infrastructure has a significant effect on student attendance and dropout rates. Cuyvers et al. (2011) analyzed the impact of school infrastructure on the well-being of students in Flemish secondary schools in Belgium and concluded that the quality of school infrastructure has a strong effect on a student's perception of his or her well-being. The school rehabilitation and modernization activities are based on this research.

#### *Lessons from the curriculum reform and other recent MSE projects*

- 49. The Danish reforms (launched in 2014) provide inspiration to Croatia on how to embed a comprehensive research program into the rollout of the WDS reform to allow for learning and adaption.** This approach mirrors the approach taken by the MSE during the introduction of the curriculum reform: pilot while carefully monitoring both processes and outcomes, learn from the experience, adapt, and expand rollout. The recent introduction of the new curriculum in which a sample of 74 schools was selected to participate in the pilot and included various types of schools in all counties—both rural and urban, schools of different sizes, and with different digital maturity levels—provides relevant learnings for the phased rollout of the WDS reform. The schools were required to apply to a public call, accompanied by approvals from the school founders, school boards, teachers' councils, and parents' councils. Preparation and training of teachers, school support staff, and school principals was conducted in all participating schools. Lessons learned from the pilot, including the need for in-person training of teachers in addition to online courses, need for extra training on designing and implementing new assessment methods (for example, measuring problem-solving competences), and the need for adjustment of timing and requirements for public procurement procedures, proved valuable in the rollout of the reform nationwide. Furthermore, the MSE

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<sup>19</sup> See Alonso and Sánchez 2011.





plans to apply the lessons learned regarding the new administrative procedures, school selection processes, training methods, and so forth, to the design and implementation of the WDS reform.

#### *Lessons on citizen engagement*

50. **Citizen engagement and community involvement are critical to increase awareness of the benefits of the Project activities and for the political sustainability of the reform.** One important factor that led the *Education Sector Development Project* in Croatia to bear fruit was high awareness of Project activities among education authorities and key stakeholders and public support for those changes. Lessons from broad international experience suggest that stakeholder engagement increases ownership for education and other reforms and increases the chance of success.

### **III. IMPLEMENTATION ARRANGEMENTS**

#### **A. Institutional and Implementation Arrangements**

51. The proposed project will be implemented over a five-year period by the MSE.
52. The Borrower will be the Republic of Croatia, and the MSE will be the implementing agency for the project. The MSE has implemented various World Bank projects over the past 15 years. The MSE will lead and coordinate implementation of the proposed project under the overall guidance of the Ministry's management team. Within MSE, State Secretary (Project Director) will have overall responsibility for project coordination and implementation. The State Secretary and the management team will form a Committee for strategic planning and implementation of the National Recovery and Resilience Plan, appointed by the Minister. In support to the State Secretary and the Committee, a Working Group will be created within the MSE. Capacity enhancement of the MSE will be financed by the Borrower to maintain, throughout project implementation, qualified staff in sufficient numbers, as well as adequate funds, facilities, services, and other resources for project implementation (including, procurement, financial management, environmental and social aspects, and monitoring and evaluation), all acceptable to the Bank. The Working Group will consist of coordinators for each of the main activities of the reform; MSE fiduciary staff, who will be responsible for financial management, procurement, monitoring, and administration; and thematic staff, who will coordinate activities with other agencies (that is, the National Centre for External Evaluation of Education, Agency for Teacher Training, and Croatian Academic and Research Network [CARNET]) on thematic activities related to teacher training, assessments, inclusive education, general education, and other relevant topics (see details in Annex 2). The Working Group will also support the design and implementation of other strategic reform initiatives of the MSE, thus strengthening the MSE's internal capacities, and provide support to MSE staff from three units: the Directorate for Support and Improvement of the Education System, the Directorate for Education, and the General Secretariat.
53. The Working Group will implement all activities related to project management, flow of funds, procurement, and monitoring and operational support, in cooperation with other responsible units of the Ministry (the Directorate for Support and Improvement of the Education System and the Directorate for Education, and the General Secretariat). The Working Group in cooperation with the General Secretariat will be responsible for the preparation and implementation of the procurement of school infrastructure



and equipment, and related activities, including financial management, disbursement, procurement, application of environmental and social policies, and reporting.

54. A POM will be prepared by the MSE and reviewed by the Bank. The POM will outline roles; reporting lines; communication procedures; and all fiduciary, monitoring, and environmental and social responsibilities. The Bank approval of the Operations Manual will be a project effectiveness condition, and the Manual will be updated periodically to reflect lessons learned from project implementation.

## **B. Results Monitoring and Evaluation Arrangements**

55. The PDO level results indicators and intermediate results indicators will be monitored using the following data collection instruments: (i) regular surveys and data collection processes, (ii) administrative data, and (iii) semiannual monitoring reports prepared by the Working Group.
56. The Working Group will carry out the day-to-day coordination of monitoring and evaluation activities. It will bring together consultants and representatives of various MSE subdivisions to monitor the project's objectives and results and will communicate with the World Bank according to the frequency of reports described in the POM. The Working Group will be responsible for the provision of timely and accurate information required for monitoring the proposed project's objectives and results achieved under their respective activities.
57. The project will finance an impact evaluation comparing outcomes in the "demonstration schools" supported by this project, with a statistically valid group of "control schools" to compare differences in average student learning outcomes and learning outcomes among disadvantaged students.
58. The project also envisions beneficiary and stakeholder participation in project monitoring activities. During implementation, feedback will be gathered from project beneficiaries, including beneficiaries with disabilities and stakeholders through surveys or other appropriate community engagement mechanisms and conducted periodically by the MSE.
59. This exercise will serve as one of the key monitoring and evaluation mechanisms used by the MSE to assess the quality of education services delivery in Croatia.

## **C. Sustainability**

60. The sustainability of the project hinges on two factors: (i) whether the MSE can build on the lessons of this project to effectively implement expanded instructional hours in all schools; and (ii) if successful, whether it can finance the additional, permanent, annual costs associated with providing more instructional hours. As discussed in the economic analysis in Annex 3, expanding instructional hours in all schools will permanently increase recurrent costs by approximately EUR150 million, or by 7.5 percent relative to 2020 recurrent spending on education. With respect to whether the MSE can build on the lessons of this project, the project has been designed to support the MSE in designing and learning from the initial roll-out and to support the national roll-out. With respect to whether the MSE can finance the additional costs associated with providing more instructional hours, over the past two years (and spanning an election and a new government), the MSE has built broad political support for this reform. During the elections in July 2020, political parties across the political spectrum expressed support for the reform.



## IV. PROJECT APPRAISAL SUMMARY

### A. Technical, Economic, and Financial Analysis (if applicable)

61. The proposed project is based on an innovative approach to design and implement reforms with efficiency gains and new resources. The project is based on cutting-edge Global Positioning System (GPS) analysis to map the efficiency and equity of the school network that allowed a better understanding of the challenges of transitioning to a single-shift, full-day school model. Such model is expected to be positive for all students, especially low-socioeconomic-status students. The project will support the launch of the first phase of school adopters (“demo schools”) and will provide support to the Ministry in further rollout of the WDS across the entire system. Thus, the expected outcomes of the project are mostly driven by the rollout of a WDS system that will expand instruction time throughout the day, and by the school network optimization and training of local actors to support the introduction of single-shift schools. Moreover, the expansion of school time will also have a positive effect on maternal labor force participation. As a result of the proposed interventions to enhance equity and efficiency, the proposed project would have a positive impact on skill development and system strengthening in the medium and long term.
62. The economic analysis for the proposed project was conducted to address (i) the project’s benefits, (ii) the rationale of public investment, (iii) the value added of the World Bank’s assistance, and (iv) the measurement of the cost-benefit ratio of the project components. The economic analysis confirms that the project’s investments of EUR25 million planned for a five-year period is justified, and the proposed interventions are likely to bring private and public benefits and savings surpassing the project’s initial costs.
63. The economic analysis for the proposed project uses a cost-benefit economic model to account for the gains of WDS. The model accounts for the economic long-term returns generated because of the skills increase derived from better learning outcomes—especially for students from a low socioeconomic background—as well as from the cash flow generated by the short-term parental (especially maternal) increase in labor force participation. The underlying assumption is that the rollout of the WDS system will entail better learning opportunities for all students in the system and will allow parents to engage in full-time work opportunities. Better learning opportunities will lead to more economic growth of Croatia over the long term, whereas higher labor supply will lead to larger individual gains.
64. Findings from the analysis indicate the project is a critical investment in basic education in Croatia. Three different scenarios were considered to compute the model, including a more optimistic (high-case) scenario, a more pessimistic (low-case) scenario, and a baseline scenario. The discount rate was assumed to be 5 percent. The baseline scenario estimates a net present value (NPV) (benefits minus costs) of US\$8.1 billion, a benefit-to-cost ratio of 8.9, and an internal rate of return (IRR) of 34.1 percent. Meanwhile, the NPVs for the low- to high-case scenarios are US\$3.8 billion and US\$12.5 billion, respectively, with a benefit-to-cost ratio of 4.1 and 13.7 and an IRR of 20.6 percent and 45.2 percent, respectively. See Annex 4 for a more detailed Economic Analysis.

### B. Fiduciary

65. **Financial Management (FM).** The FM arrangements rely on the borrower’s existing institutions and



systems to the extent possible and with due consideration for their overall capacity. It is intended that the existing FM capacities within the MSE are used for the project.

66. An assessment of the financial management capacity of the Sector for Finance and its Directorate for Support and Improvement of the Education System of the MSE (MSE Directorate) was updated in July 2021. The existing financial management arrangements in MSE have been assessed to determine if these arrangements (budgeting, accounting, reporting, internal control, staffing, funds flow and audit) are satisfactory to the World Bank. The assessment concluded that the financial management arrangements need to be reinforced for the project implementation. Subject to implementation of the agreed action plan (see below), the financial management arrangements are considered to meet the requirements of the World Bank Operational policies. The overall financial management risk is moderate with the application of the mitigation measures. Some of the mitigation measures include deployment of experienced staff, agreement on formats of interim financial reports (IFRs) and acceptance of audit terms of references (ToRs).
67. The MSE Directorate will prepare semi-annual IFRs. The IFRs will include (a) Statement of Sources and Uses of Funds; (b) Uses of funds by category; (c) Uses of funds by component (d) Statement of Designated Account. The MSE Directorate shall prepare and furnish to the World Bank not later than 45 days after the end of each calendar semester, IFRs for the project covering the semester, in form and substance satisfactory to the World Bank.
68. Project financial audits are to be carried out either by acceptable private sector auditors or by the country's State Audit Office (SAO), which is also acceptable to the Bank, under terms of reference acceptable to the Bank. The MSE expressed their interest in engaging the SAO for conducting project financial audits. To realize this, the MSE needs to make an agreement with the SAO for project financial audit. The annual audited project financial statements and the audit reports will be provided to the World Bank within six months of the end of each fiscal year. The FM assessment informs the important questions listed in Table 2.

**Table 2. Financial requirements and responsibilities**

| No. | Requirement  | Responsibility |
|-----|--|----------------|
| 1   | The MSE will need formally to assign staff in-charge of the Project financial management arrangements.   | MSE            |
| 2   | The Financial Management sections of the POM will be drafted to describe all financial management arrangements.  | MSE            |
| 3   | For the category of expenditure related to small grants to be able to withdraw the funds the MSE will need to prepare a Small Grants Manual (separate section/chapter of the POM), which the Bank will review and approve. | MSE            |

69. The project will have the flexibility of using retroactive financing. No withdrawals shall be made for payments made prior to the date of the Loan Agreement, except withdrawals up to an aggregate amount not to exceed 20 percent of the total amount of the loan may be made for payments for Eligible Expenditures of the project as per the Loan Agreement. The eligible time period for retroactive financing will be defined in the financing agreement (up to one year prior to the signing date).



70. **Procurement.** The key implementing agency of the project is Ministry of Science and Education (MSE). The MSE will be accountable for the execution of project activities and implementation would rely on its existing structures. The POM will elaborate among others, the details of the project governance structure, project implementation and procurement management arrangements. As a government institution, the MSE is bound by and follows the national regulations, including for public procurement. It applies them when utilizing funds from the state budget and all EU financial instruments. Within the General Secretariat of the MSE, the General Affairs and Human Resources Department (Service for Property and Technical Affairs and Procurement) is responsible for the public procurement including development, improvement, and coordination of the entire public procurement, issuing opinions, instructions and provision of legal assistance relating to the application of the PPA and other regulations in the field of public procurement.
71. The Bank's procurement framework will apply to the operation. The project will follow the 'World Bank Procurement Regulations for Investment Project Financing (IPF) Borrowers (Fourth Edition, November 2020) (Procurement Regulations). National Procurement Procedure (NPP) is one of the options provided by the Procurement Regulations. Approaching the national market, the country's own procurement procedures may be used according to the national public procurement framework. NPP may be applied for selected contracts (likely the majority of them), based on the findings of the Project Procurement Strategy for Development (PPSD) and subject to meeting the requirements of the Procurement Regulations. Based on value and nature of a contract, and where there is a need for international expertise for a specific assignment, international market approach might be more appropriate. The World Bank's 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants', (revised as of July 01, 2016) (Anticorruption Guidelines), will apply to the project.
72. In accordance with paragraph 5.9 of the Procurement Regulations, the World Bank's Systematic Tracking and Exchanges in Procurement system will be used to prepare, clear, and update Procurement Plan and conduct all procurement transactions for the project together with the provisions stipulated in the Loan Agreement.
73. The initial draft of the Project Procurement Strategy for Development was prepared during appraisal. The PPCSD is the basis for the procurement arrangements under the project. The Procurement Plan covering the first 18 months of project implementation is prepared and agreed at project negotiation. Part of the loan will finance adaptation works, equipment and works supervision contracts for 50 schools. The schools will be selected based on calls for expressions of interest. Therefore, given the demand driven nature of the project, the detailed procurement plan is deferred to project implementation.
74. Based on the capacity of the implementing agency and Overall risk analysis overall risk for procurement after mitigation is set to **Moderate**. The procurement specific risks, the proposed mitigating measures and the risk owner are indicated in the PPCSD.

### C. Legal Operational Policies

|   | Triggered? |
|---|------------|
| Projects on International Waterways OP 7.50 | No         |
| Projects in Disputed Areas OP 7.60          | No         |



#### **D. Environmental and Social**

The Project will support the modernization of basic education in Croatia through expansion of instruction time, and improvements to the school network infrastructure and student learning outcomes, thus contributing to a more equitable and relevant education system in Croatia. In particular, the Project's second component will support development of design solutions of new infrastructure standards for Croatian schools in line with OECD-EU climate, environment, and energy-efficient standards. The Project will support minor civil works, mainly interior rehabilitation and adaptation of learning environments; informal learning spaces; dining facilities; and adding energy-efficient elements including solar panels, lights, and new windows in "demonstration schools" selected for adoption of a new WDS model. Specific investments will be identified during project implementation.

Of 10 Environment and Social Standards (ESS), 7 are relevant:

ESS 1) Assessment and Management of Environmental and Social Risks and Impacts;

ESS 2) Labor and Working Conditions;

ESS 3) Resource Efficiency and Pollution Prevention and Management;

ESS 4) Community Health and Safety;

ESS 6) Biodiversity Conservation and Sustainable Management of Living Natural Resources;

ESS 8) Cultural Heritage; and ESS 10) Stakeholder Engagement and Information Disclosure.

The project environmental risk is moderate and is predominately linked to rehabilitation and refurbishing of existing schools envisaged under subcomponent 2.2. In exceptional cases, the Project will support construction of smaller annexes (1-2 classrooms), under the same sub-component. Construction of new schools (or other facilities) will not be financed from the Project. Given that the planned works are general and small-scale construction activities, the potential risks and adverse impacts on human populations and/or the environment are not likely to be significant. This is because the Project activities are not complex or large, are planned predominantly in urbanized areas, do not involve activities that have a high potential for harming people or the environment, and are mostly located away from environmentally or socially sensitive areas. While schools may be located in the developed and populated parts of Natura 2000 areas, given that the activities will mostly be confined to the existing ecological footprint (or minimally expanded, in the case of annexes), no significant risks or impacts to biodiversity and health of habitats is expected. Due to limited intervention scope, the potential risks and impacts are



- (i) predictable and expected to be temporary and/or reversible;
- (ii) low in magnitude;
- (iii) site-specific, without likelihood of impacts beyond the actual footprint of the Project; and
- (iv) have a low probability of serious adverse effects to human health and/or the environment. The Project's risks and impacts can be easily mitigated in a predictable manner.

Social risk is rated as moderate. The expected civil works are minimal and only limited to rehabilitation and adapting and equipping of schools whose location, neighboring disposition, and geographic spread are not yet known. However, any potential negative social impacts are likely to be site-specific, without the likelihood of impacts beyond the project footprint, low in magnitude, and can be identified and mitigated. Currently, no land acquisition is expected. Given the small nature of the civil works under this project, labor influx is minimal. The use of security forces is not expected. The project will not undertake activities that expose the community to hazardous materials. Rehabilitation works will not disrupt learning, and construction areas will be fenced and signaled to mitigate accidents, noise, and other disturbances. COVID-19 prevention and management measures following national guidelines and consistent with World Health Organization recommended guidelines will be put in place to manage the risks of COVID-19 at the project sites and surrounding communities. However, challenges may present in terms of appropriate inclusive methods for stakeholder engagement, considering that students-who are a significant portion of the beneficiaries of this project - are children, including some with special needs and some from marginalized Roma populations. The project also seeks to engage a diverse range of stakeholders to build consensus for the reforms, against challenges including

- (i) lack of adequate coordination among key actors, such as the MSE and school founders, in using evidence and data to inform administrative decision making;
- (ii) the sector is highly centralized with few mechanisms for community participation, so it lacks wider consultation and over-relies on legislation to implement changes. Thus, stakeholder engagement will need to mitigate conflicts among key actors;
- (iii) inertia and unwillingness to participate in the WDS; (iv) resistance to educational change; and
- (v) disparity in the degree and results of community participation. These risks are further exacerbated with the challenges and limitations posed by the pandemic, limiting consultations mostly to virtual interactions.

The risk of gender-based violence, Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) has been screened using the SEA/SH screening tool and is low.





The Project builds on the Bank's previous and current engagement in the education sector in Croatia. The implementing MSE will lead and coordinate project activities and will be responsible for the overall implementation of ESS. MSE staff are highly educated and have previous experience with World Bank safeguards, but the level of expertise and capacity will not be adequate to implement the ESS in line with new Environmental and Social Framework (ESF) requirements. Therefore, a full-time experienced environmental specialist and a full-time social development specialist will be hired by the MSE, for the period of project implementation. PIU will also include communication specialist.

Given that location of schools (and consequently precise works) are not known so far, MSE has prepared an Environmental and Social Management Framework (ESMF) to guide the preparation of site-specific Environmental and Social Management Plans (ESMPs) and ESMP Checklists and also provides a template for preparation of these documents. Biodiversity protection measures will be integrated into ESMP/ESMP Checklists, in case of works within the Natura 2000 network- the largest coordinated network of protected areas in the world. Though unlikely, works may take place in cultural heritage protected buildings. For these subprojects, a CHMP will be prepared, whether as a stand-alone document or as part of the ESMP/ESMP Checklist. These site-specific documents will constitute an integral part of bidding documents for contractors.

The ESMF also includes a Labor Management Plan (LMP) and details specific guidance on worker Occupational Health and Safety (OHS) measures and the safety of students, teachers, and visitors during the implementation of works (community safety), though it is not likely that rehabilitation and adaptation works will be carried out during regular school operation activities.

A Stakeholder Engagement Plan (SEP) has been prepared, identifying relevant stakeholder and procedures for consultations and engagement, grievance redress mechanisms (GRM) as well as information disclosure.

PIU Environmental Specialist and Social Specialist will prepare and submit regular monitoring reports on the environmental, social, health and safety performance of the Project, including implementation of the ESCP, and any E&S due diligence document prepared or to be prepared and implemented (ESMP, ESMP Checklist and CHMP; depending of the type of the subproject), stakeholder engagement activities, and functioning of the grievance mechanism(s) for the Project. The design standards and other TA documents and reports (e.g. those planned in sub-component 3.1) will be scrutinized against relevant ESSs. In the case of retroactive financing of works/TA/designs, prior to final decision on financing, PIU will carry out E&S Audit (subject to WB approval) of the activity proposed for financing, in order to establish full compliance with ESF requirements.

The Environmental and Social Commitment Plan includes the following:

- a) Finalization, consultation, and redisclosure of the ESMF within 30 days following Loan Agreement Effective date;
- b) Finalization and redisclosure of the SEP within 30 days following Loan Agreement Effective date.





Prior to project appraisal, the following draft documents were prepared and disclosed on the MSE web site on July 14, 2021:

- o An ESMF document that includes relevant ESF Standards
- o LMP, which is included in the ESMF
- o A Stakeholder Engagement Plan (SEP) with a project-level Grievance Redress Mechanism (GRM)

## **V. GRIEVANCE REDRESS SERVICES**

75. Communities and individuals who believe they are adversely affected by a World Bank-supported project may submit complaints to existing project-level grievance redress mechanisms or the World Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address project-related concerns. Project-affected communities and individuals may submit their complaint to the World Bank's independent Inspection Panel, which determines whether harm occurred, or could occur, because of World Bank noncompliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate GRS, please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).

## **VI. KEY RISKS**

76. **The overall risk to the achievement of the PDO for the Project has been assessed as Moderate.** After mitigating measures, stakeholder risk is substantial, while other risks including political and governance, macroeconomic, technical design, institutional capacity, fiduciary, environmental and social and other risks relate to the ongoing COVID-19 pandemic have been assessed as Moderate. Risks for sector strategies and policies, after mitigating measures, have a residual risk rating of Low. As most of the risk mitigation measures will be gradually rolled out during implementation, residual risks will be proactively monitored and updated during project implementation.

77. **Institutional Capacity Risk is rated as Moderate.** During the past decade, the institutional capacity of the MSE to implement complex structural reforms has proven insufficient. The curriculum reform that was launched in 2019 was under discussion for more than a decade, and although the rollout seems to have gone reasonably well, it was implemented without a designated unit in the MSE, without a publicly available action plan, and without an annual progress report on the implementation of the reform. To mitigate this problem and strengthen MSE capacity, the Bank will provide direct support to key aspects of implementing the reform by establishing and supporting a permanent Working Group within the Ministry. In addition to the design of WDS, the Ministry requested that the project finance the design of other educational strategic reform initiatives (at the preprimary, upper secondary, and/or higher-education level) outlined in the NRRP through the Working Group.

78. **Stakeholder Risk is rated as Substantial.** Weak buy-in and possible opposition of some of the education



stakeholders, including possibly the teachers' unions, can be expected. Given that the number of instructional hours will be increased within the WDS system, in the months ahead, the negotiations will involve deciding on a new statutory teaching load and how much teachers will be paid for those additional hours of teaching. In addition, over time, the public's perception of the benefits of WDS might be tainted because of its association with the challenges of network optimization. To mitigate these risks, the project will also support the design and implementation of a stakeholder communication and outreach strategy on the WDS and safeguards and implementation of grievance redress mechanisms to build consensus and arrive at joint decisions acceptable to all stakeholders involved.

79. **Political and Governance Risk is rated as Moderate.** Historically, Croatia has faced internal resistance and lacked the political strength to implement large-scale reforms. However, WDS reform is now a core element of the NRRP, and the infrastructural investments needed for nationwide implementation will be financed through EU funds over the next decade. This lowers the political risk significantly, as the adopted reforms are likely to be accepted across the whole political spectrum. Also, the Bank project will support the MSE to communicate the comprehensive WDS reform to ensure appropriate political and public understanding and support.
80. **Macroeconomic Risk is rated as Moderate.** Croatia's fiscal and economic outlook has been affected by the COVID-19 pandemic, and potential vulnerabilities to exogenous shocks could pose macroeconomic risks to the project. These circumstances pose some fiscal risk stemming from a potential slowdown in growth, which, in turn, could result in a reduced fiscal space for project implementation. However, given that this reform has been prioritized by the government in the Croatian National Recovery and Resilience Plan, the risk of reduced fiscal space for the implementation is significantly lower than previously assessed.
81. **Sector Strategies and Policies Risk is rated as Low.** Because the WDS has been accepted as a flagship project in the Croatian NRRP and in the National Development Strategy 2030, there is a low risk of change in the sector strategies and policies regarding implementing this project. The disbursement of RRF funding will depend on the MSE reaching the milestones outlined in the RRF, and much of the technical assistance provided through the project will be aimed at supporting the Ministry to reach these milestones.
82. **Technical Design Risk is rated as Moderate.** The Bank will help the Croatian government design the reform through the technical assistance in the project. It will also support the government in amending the necessary legislation to allow for the implementation of the reform nationwide. In the unlikely event that the Croatian government may not be able to secure the necessary EU finances for nationwide implementation of WDS reform in the upcoming financing period (2021–27) (beyond the RRF), the Bank team will support the MSE in considering and developing alternative solutions to finance the additional cost of the national rollout of the reform completely or partially through the state budget (over an extended period). However, the Bank's technical assistance is expected to strengthen Croatia's position during its discussions with the European Commission on securing enough funding from the EU sources.
83. **Fiduciary Risk is rated as Moderate.** The risk will be revisited during project implementation and updated, based on the capacity of the implementing agency and the status of project implementation.
84. **Environmental and Social Risk is rated as Moderate.** The project environmental and social risks are predominately linked to minor rehabilitation of existing schools. Given that these are general and small-



scale construction activities, the potential adverse risks and impacts on human populations and/or on the environment are not likely to be significant. This is because the Project activities are not complex or large, do not involve activities that have a high potential for harming people or the environment, and are located away from environmentally or socially sensitive areas.

85. **Other Risk is rated as Moderate.** This risk relates to the ongoing COVID-19 pandemic, which is expected to create challenges due to restrictions on international travel, site visits, and meetings in the early phase of implementation. To mitigate these challenges, intensified virtual consultations will continue to be held during the project preparation and early implementation period. World Bank local staff will hold in-person meetings on the ground and travel locally for site visits as soon as the epidemiological situation in the country allows for it.



## ANNEX 1: Results Framework and Monitoring

### Results Framework

COUNTRY: Croatia

Croatia: Towards Sustainable, Equitable and Efficient Education Project

### Project Development Objectives(s)

To improve the learning environment in select schools under the Whole Day School (WDS) system and to strengthen the capacity of the Ministry of Science and Education to scale up the WDS system and implement sector reforms.

### Project Development Objective Indicators

| Indicator Name  | PBC | Baseline  | Intermediate Targets  |   |  |  | End Target   |
|---|-----|---|---|---|--|--|--|
|   |     |   | 1   | 2   | 3  | 4  |  |
| Improve the learning environment in selected schools under the WDS system                                     |     |   |   |   |  |  |  |
| Students benefiting from the WDS pedagogical model (Number)   |     | 0.00  | 0.00  | 16,000.00   | 32,500.00  | 32,500.00  | 32,500.00  |
| Teachers in WDS demonstration schools receiving training from learning counselors (Number)                    |     | 0.00  | 0.00  | 600.00  | 1,000.00   | 1,250.00   | 1,250.00   |
| Schools with improved physical environment according to WDS standards (Number)                                |     | 0.00  | 0.00  | 15.00   | 30.00  | 50.00  | 50.00  |
| Strengthen the capacity of the MSE to scale up the WDS and implement sector reforms                           |     |   |   |   |  |  |  |
| MSE staff and school founders preparing cost-effective school network plans to scale up the WDS system (Text) |     | 0% of MSE staff and school founders preparing cost-effective school network plans to scale up the WDS system. | 0% of MSE staff and school founders preparing cost-effective school network plans to scale up the WDS | 0% of MSE staff and school founders preparing cost-effective school network plans to scale up the WDS | 25% of MSE staff and school founders preparing cost-effective school network plans to scale up the WDS | 50% of MSE staff and school founders preparing cost-effective school network plans to scale up the WDS | 75% of MSE staff and school founders preparing cost-effective school network plans to scale up the WDS |



| Indicator Name   | PBC | Baseline | Intermediate Targets |         |         |         | End Target |
|--|-----|----------|----------------------|---------|---------|---------|------------|
|  |     |          | 1                    | 2       | 3       | 4       |            |
|  |     |          | system.              | system. | system. | system. | system.    |
| MSE staff participating in training on designing and implementing reforms (Percentage) |     | 0.00     | 90.00                | 100.00  | 100.00  | 100.00  | 100.00     |

### Intermediate Results Indicators by Components

| Indicator Name  | PBC | Baseline  | Intermediate Targets                                |   |   |   | End Target  |
|---|-----|---|---|---|---|---|---|
|   |     |   | 1   | 2   | 3   | 4   |   |
| Component 1: Ensure that more hours translate into more student learning  |     |   |   |   |   |   |   |
| Legislation on teacher and staff norms revised (Yes/No)   |     | No  | Yes   | Yes   | Yes   | Yes   | Yes   |
| Pedagogical model documentation designed for WDS (Yes/No)   |     | No  | Yes   | Yes   | Yes   | Yes   | Yes   |
| Labor supply of mothers with children aged 6-14 benefiting from WDS (hours willing to work per day and hours of childcare per day) (Text) |     | Baseline measured at the beginning of school Year 1 | Baseline measured at the beginning of school Year 1 | Baseline measured at the beginning of school Year 1 | 10% increase in average hours willing to work<br>10% decrease in average hours of childcare | 10% increase in average hours willing to work<br>10% decrease in average hours of childcare | 20% increase in average hours<br>20% decrease in average hours of childcare |
| Number of principals in low-performing WDS demonstration schools participating in peer mentoring program (cumulative) (Number)            |     | 0.00  | 0.00  | 15.00   | 25.00   | 25.00   | 25.00   |
| Percentage of non-WDS demonstration schools joining the peer-mentoring program  |     | 0.00  | 0.00  | 5.00  | 10.00   | 15.00   | 20.00   |



| Indicator Name   | PBC | Baseline | Intermediate Targets |           |           |           | End Target |
|--|-----|----------|----------------------|-----------|-----------|-----------|------------|
|  |     |          | 1                    | 2         | 3         | 4         |            |
| (Percentage)   |     |          |                      |           |           |           |            |
| Share of primary schools using new education database towards learning (Percentage)  |     | 0.00     | 0.00                 | 0.00      | 20.00     | 50.00     | 100.00     |
| Students benefiting from direct interventions to enhance learning (CRI, Number)  |     | 0.00     | 0.00                 | 16,000.00 | 32,500.00 | 32,500.00 | 32,500.00  |
| <b>Component 2: Design and demonstrate infrastructure solutions for WDS</b>  |     |          |                      |           |           |           |            |
| Standard designs developed for new modern and energy-efficient (green) schools (Yes/No)  |     | No       | No                   | No        | No        | Yes       | Yes        |
| Percentage of school founders receiving financing and guidance to prepare documentation for school infrastructure (Percentage) |     | 0.00     | 0.00                 | 0.00      | 0.00      | 50.00     | 70.00      |
| Mechanism to foster peer-to-peer learning on learning spaces developed and implemented (Yes/No)                                |     | No       | No                   | No        | No        | Yes       | Yes        |
| Number of WDS demonstration schools benefiting from infrastructure investments (Cumulative) (Number)                           |     | 0.00     | 0.00                 | 15.00     | 30.00     | 50.00     | 50.00      |
| <b>Component 3: Strengthen Ministry's capacity to implement reforms</b>  |     |          |                      |           |           |           |            |
| Working Group with the capacity and responsibility to plan and implement reforms in the MSE established (Yes/No)               |     | No       | Yes                  | Yes       | Yes       | Yes       | Yes        |
| Comprehensive communication and outreach   |     | No       | Yes                  | Yes       | Yes       | Yes       | Yes        |



| Indicator Name  | PBC | Baseline   | Intermediate Targets  |  |  |  | End Target  |
|---|-----|--|---|--|--|--|---|
|   |     |  | 1   | 2  | 3  | 4  |   |
| strategy for the WDS developed (Yes/No)   |     |  |   |  |  |  |   |
| Percentage of project beneficiaries reporting on beneficiary surveys satisfaction with engagement processes in the development and rollout of WDS in demonstration schools (Percentage) |     | 0.00   | 40.00   |  | 50.00  |  | 60.00   |
| Number of school founders benefiting from capacity building and training on network planning and costing (Number)   |     | 0.00   | 0.00  | 10.00  | 20.00  | 30.00  | 40.00   |
| Working Group produces Annual Reports including feedback from school founders on the progress of the WDS implementation (Text)  |     | Limited capacity of the Ministry to monitor implementation of the reform and use data for decision-making. | Roadmap for the reform program of the Ministry (i.e. outlined in the NRRP). | Progress on WDS reform monitoring and implementation reflected in Annual Report. | Progress on WDS reform monitoring and implementation reflected in Annual Report. | Progress on WDS reform monitoring and implementation reflected in Annual Report. | Working Group elaborates on Annual Reports including feedback from school founders on infrastructure and single-shift transition. |
| Impact evaluation designed and implemented (Yes/No)   |     | No   | No  | No   | No   | Yes  | Yes   |
| Share of students participating in the WDS reporting a boost in well-being, satisfaction and motivation in student surveys (Percentage)   |     | 0.00   | 30.00   |  | 60.00  |  | 80.00   |



**Monitoring & Evaluation Plan: PDO Indicators**

| Indicator Name   | Definition/Description  | Frequency | Datasource                               | Methodology for Data Collection | Responsibility for Data Collection    |
|--|---|-----------|--|---------------------------------|---------------------------------------|
| Students benefiting from the WDS pedagogical model   | This indicator describes the total number of students benefiting from the WDS pedagogical model.  | Annually  | Project management reports and documents | MSE will monitor progress       | MSE with support from school founders |
| Teachers in WDS demonstration schools receiving training from learning counselors                      | This indicator measures the number of teachers in WDS demonstration schools that will receive training and support from learning counselors who will be education experts from higher education and education institutes. | Annually  | Project management reports and documents | MSE will monitor progress       | MSE with support from ETTA            |
| Schools with improved physical environment according to WDS standards                                  | This indicator indicates the number of demonstration schools that will be refurbished or rehabilitated according to WDS standards that will be designed through the project.  | Annually  | Project management reports and documents | MSE will monitor progress       | MSE with support from school founders |
| MSE staff and school founders preparing cost-effective school network plans to scale up the WDS system | This indicator measures the increased capacity of the MSE and school founders to implement complex reform, through successful preparation of documentation for investments in school infrastructure using cost-           | Annually  | Project management reports and documents | MSE will monitor progress       | MSE with support from school founders |





|   |   |          |  |                           |     |
|---|---|----------|--|---------------------------|-----|
|   | effective options to scale up the WDS system.   |          |  |                           |     |
| MSE staff participating in training on designing and implementing reforms | This indicator identifies the percentage of MSE staff participating in training on designing and implementing reforms to carry out the WDS reform as well as other educational initiatives. | Annually | Project management reports and documents | MSE will monitor progress | MSE |

#### Monitoring & Evaluation Plan: Intermediate Results Indicators

| Indicator Name   | Definition/Description   | Frequency | Datasource                               | Methodology for Data Collection | Responsibility for Data Collection |
|--|--|-----------|--|---------------------------------|------------------------------------|
| Legislation on teacher and staff norms revised   | This indicator measures whether the legislation regarding staff and teacher norms to implement WDS reform have been revised.   | Year 1    | Project management reports and documents | MSE will monitor progress       | MSE                                |
| Pedagogical model documentation designed for WDS   | This indicator measures whether the pedagogical model required for the introduction of the WDS system has been designed.   | Year 1    | Project management reports and documents | MSE will monitor progress       | MSE                                |
| Labor supply of mothers with children aged 6-14 benefiting from WDS (hours willing to work per day and hours of childcare per day) | This indicator measures the labor supply of mothers with children aged 6-14 benefitting from WDS. The indicator will take the values 0 to 8 and will be derived from a questionnaire asking, specifically, "How many | Annually  | Survey implemented by schools            | MSE will monitor progress       | MSE                                |



|   |   |                      |   |                           |                                       |
|---|---|----------------------|---|---------------------------|---------------------------------------|
|   | hours per day would you be willing to work?" and "How many hours per day do you spend on childcare activities?"   |                      |   |                           |                                       |
| Number of principals in low-performing WDS demonstration schools participating in peer mentoring program (cumulative) | This indicator measures the number of principals from schools with below average academic performance that receive mentoring to implement the WDS system (Cumulative).            | Annually             | Project management reports, documents and site visits | MSE will monitor progress | MSE with support from school founders |
| Percentage of non-WDS demonstration schools joining the peer-mentoring program  | This indicator measures the percentage of non-WDS schools joining a "peer-mentoring program" pairing schools with below average academic performance with top-performing schools. | Annually             | Project management documents and reports              | MSE will monitor progress | MSE with support from school founders |
| Share of primary schools using new education database towards learning  | This indicator measures the percentage of elementary schools that will use new data on student learning to improve learning outcomes and teaching practices.                      | Annually from Year 3 | Project management reports and documents              | MSE will monitor progress | MSE with support from school founders |
| Students benefiting from direct interventions to enhance learning   |   | Annually             | School reporting system                               | MSE will monitor progress | MSE                                   |
| Standard designs developed for new modern and energy-efficient (green) schools  | This indicator measures the development of standard designs for new modern and energy-efficient (green)   | Years 4 and 5        | Project management reports and documents              | MSE will monitor progress | MSE                                   |



|   |  |               |  |                           |                                       |
|---|--|---------------|--|---------------------------|---------------------------------------|
|   | schools.   |               |  |                           |                                       |
| Percentage of school founders receiving financing and guidance to prepare documentation for school infrastructure | This indicator measures the percentage of school founders receiving financing and guidance to prepare documentation for school infrastructure.   | Years 4 and 5 | Project management reports and documents | MSE will monitor progress | MSE                                   |
| Mechanism to foster peer-to-peer learning on learning spaces developed and implemented                            | This indicator measures the development and implementation of a mechanism to foster peer-to-peer learning on learning spaces.  | Years 4 and 5 | Project management reports and documents | MSE will monitor progress | MSE with support from school founders |
| Number of WDS demonstration schools benefiting from infrastructure investments (Cumulative)                       | This indicator measures the number of schools benefiting from infrastructure investments, including minor rehabilitation and refurbishment of learning environments, informal learning spaces, dining facilities, etc. that will allow an initial group of schools to adopt the WDS model. | Annually      | School reporting system                  | MSE will monitor progress | MSE with support from school founders |
| Working Group with the capacity and responsibility to plan and implement reforms in the MSE established           | This indicator monitors the establishment and ongoing functioning of a strategic planning and reform implementation Working Group, which will play a key role from year 1 of implementation to building  | Annual        | Project management reports and documents | MSE will monitor progress | MSE                                   |



|  |   |                  |  |                           |                                       |
|--|---|------------------|--|---------------------------|---------------------------------------|
|  | capacity of the MSE to plan and implement reforms.  |                  |  |                           |                                       |
| Comprehensive communication and outreach strategy for the WDS developed  | This indicator refers to the development of an effective nation-wide communication and outreach strategy led by the MSE to inform and engage with all stakeholders and the public about the comprehensive WDS reform.   | Annually         | Project management reports and documents | MSE will monitor progress | MSE with support from school founders |
| Percentage of project beneficiaries reporting on beneficiary surveys satisfaction with engagement processes in the development and rollout of WDS in demonstration schools | This is a citizen engagement indicator to measure whether project beneficiaries (students, teachers, principals, parents, school founders, local government, etc.) feel their voices are heard, and therefore engagement processes effective, in the development and roll out of the WDS reform process in demonstration schools. | Years 1, 3 and 5 | Project management reports and documents | MSE will monitor progress | MSE                                   |
| Number of school founders benefiting from capacity building and training on network planning and costing   | This indicator refers to the number of school founders benefiting from capacity building and training on network planning and costing. To this end, this indicator will measure the needs assessments of school founders, supporting school   | Annually         | Project management reports and documents | MSE will monitor progress | MSE                                   |



|   |  |                |  |                                    |       |
|---|--|----------------|--|------------------------------------|-------|
|   | founders to conduct detailed analyses of their school networks and simulations; regional workshops; and preparation of local “school network plans for 2030.”  |                |  |                                    |       |
| Working Group produces Annual Reports including feedback from school founders on the progress of the WDS implementation | This indicator measures the capacity of the MSE via an established Working Group within the Ministry to use data and monitor the implementation of complex reforms through the effective monitoring of the WDS implementation based on feedback from school founders and transparent reporting on the progress of reforms. | Annually       | Project management reports and documents | MSE will monitor progress          | MSE   |
| Impact evaluation designed and implemented  | The project will finance an impact evaluation comparing outcomes in the “demonstration schools” supported by this project, with an appropriately selected group of “control schools” to compare within and between-school differences of quality (all students) and equity (low-socioeconomic status students).            | End of project | NCVVO evaluations                        | NCVVO will conduct the evaluations | NCVVO |



|  |   |                  |                    |                               |                               |
|--|---|------------------|--------------------|-------------------------------|-------------------------------|
| Share of students participating in the WDS reporting a boost in well-being, satisfaction and motivation in student surveys | Additionally, the NCVVO plans to conduct a series of surveys to measure socioeconomic status, well-being, student satisfaction and motivation to monitor the progress of the project. | Years 1, 3 and 5 | Survey instruments | MSE will monitor the progress | MSE with the support of NCVVO |
|  |   |                  |                    |                               |                               |
|  |   |                  |                    |                               |                               |



## ANNEX 2: Implementation Arrangements and Support Plan

1. The proposed project will be implemented over a five-year period by the MSE. The Borrower will be the Republic of Croatia, and the MSE will be the implementing agency for the project. The MSE has implemented various World Bank projects over the past 15 years. The MSE will lead and coordinate implementation of the proposed project under the overall guidance of the Ministry's management team. Within MSE, State Secretary (Project Director) will have overall responsibility for project coordination and implementation. The State Secretary and the management team will form a Committee for strategic planning and implementation of the National Recovery and Resilience Plan, appointed by the Minister. In support to the State Secretary and the Committee, a Working Group will be created within the MSE and will consist of *inter alia* (i) a Working Group project manager to be hired by MSE; (ii) three specialists for various reform efforts (pre-primary, primary and secondary); (iii) two specialists to be appointed among MSE's civil servants with adequate competence in procurement and in financial management; (iv) two specialists to be appointed among MSE's civil servants with adequate competence in environment and social development; and (v) one communication specialist to be hired by MSE. Capacity enhancement of the MSE will be financed by the Borrower to maintain, throughout project implementation, qualified staff in sufficient numbers, as well as adequate funds, facilities, services, and other resources for project implementation (including, procurement, financial management, environmental and social aspects, and monitoring and evaluation), all acceptable to the Bank. The Working Group will consist of coordinators for each of the main activities of the reform; MSE fiduciary staff, who will be responsible for financial management, procurement, monitoring, and administration; and thematic staff, who will coordinate activities with other agencies (that is, the National Centre for External Evaluation of Education, Agency for Teacher Training, and CARNET on thematic activities related to teacher training, assessments, inclusive education, general education, and other relevant topics. The Working Group will also support the design and implementation of other strategic reform initiatives of the MSE, thus strengthening the MSE's internal capacities, and provide support to MSE staff from three units: the Directorate for Support and Improvement of the Education System, the Directorate for Education, and the General Secretariat.
2. The Working Group will implement all activities related to project management, flow of funds, procurement, and monitoring and operational support, in cooperation with other responsible units of the Ministry (The Directorate for Support and Improvement of the Education System and the Directorate for Education, and the General Secretariat). The Working Group in cooperation with the General Secretariat will be responsible for the preparation and implementation of the procurement of school infrastructure and equipment, and related activities, including financial management, disbursement, procurement, application of environmental and social policies, and reporting (Table A2.1).
3. A POM will be prepared by the MSE and reviewed by the Bank. The POM will outline roles; reporting lines; communication procedures; and all fiduciary, monitoring, and environmental and social responsibilities. The Bank approval of the POM will be a project effectiveness condition, and the POM will be updated periodically to reflect lessons learned from project implementation. Additionally, a Small Grants Manual (separate section/chapter of the POM) will be prepared, separate from the POM, which will also require Bank approval.

**Table A2.1. Project responsibilities of MSE units by components and subcomponents**



| Components and subcomponents  | MSE units responsible  |
|---|--|
| 1. Ensure that more hours translate into more student learning  |  |
| 1.1: Develop WDS system and refine system following experience during initial years of reform           | Directorate for Support and Improvement of the Education System<br><br>Directorate for Education                                       |
| 1.2: Help utilize administrative and student performance data to improve student learning               |  |
| 2. Design and demonstrate infrastructure solutions for WDS  |  |
| 2.1: Prepare new infrastructure standards for schools   | Capital Investments Department<br><br>Directorate for Support and Improvement of the Education System<br><br>Directorate for Education |
| 2.2: Create “demonstration schools”   |  |
| 3. Strengthen MSE’s capacity to implement reforms   |  |
| 3.1: Support establishment of the Working Group   | Directorate for Support and Improvement of the Education System<br><br><br><br>Directorate for Education                               |
| 3.2: Update the costing of the WDS, revise national regulations, and prepare local school network plans |  |
| 3.3: Support the design of other educational strategic reform initiatives                               |  |
| 3.4: Fund a research program to document results  |  |

### Financial Management Implementation Arrangements

4. The project will use existing financial management systems available in the MSE for the project fiduciary purposes. The strengths that provide a basis of reliance on the project financial management arrangements include: (a) use of existing civil servants with adequate background and experience in financial management, (b) familiarity with World-bank financed projects in the past (c) familiarity with implementing projects financed by other donors (d) ownership over the project by the MSE.
5. **Planning and budgeting.** The project will finance items included in the project procurement plan. There will be regular project budgeting and planning activities and monitoring of the execution of the plans and budgets. No counterpart funding is envisaged for this project as the loan will finance up to 100 percent of the defined project expenditures including any taxes.
6. **Accounting system.** MSE uses SAP as the accounting system, which has been installed in 2005. The system incorporates two main modules: finance and accounting module and inventory management. The system contains different, but integrated modules: general ledger, budget, fixed assets module, reporting. The project accounting records are done by activities, which can fall under different expenditure categories, showing for each invoice the source of financing. The recording is done in local currency, Kuna (HRK), using the Croatian state budget classifications (economic, functional, program, organizational and locational). Payments are done using the Treasury SAP system.





7. Regular back-ups on a cloud and external disks are taken once a month and kept in a Bank's vault.
8. **Financial Reporting.** The Directorate will furnish to the Bank the semi-annual IFRs not later than 45 days after the end of the reporting semester. Annual financial statements will be prepared separately by the Directorate and will include all project costs. The IFRs will be prepared on the cash-basis of accounting. The IFRs as well as the annual project financial statements will include the following reports stated in the currency of the loan, namely: (a) Statement of Sources and Uses of Funds; (b) Uses of funds by category; (c) Uses of funds by component (d) Statement of Designated Account; and (e) Explanatory Notes and Accounting Policies (only annual audited Project reports).
9. **Internal Controls and Internal Audit.** The MSE Directorate has adequate internal controls for the project, including regular reconciliation of DA, adequate segregation of duties, proper accounting policies and procedures.
10. There will be regular reconciliations prepared: SOE will be reconciled with the accounting data for every withdrawal application, monthly reconciliations of DA and of accounting data with. client connection disbursements will be performed. The Directorate will perform regular reconciliations of project accounting records with beneficiaries' trial balances.
11. The contracts are verified and approved by the Project Director/Coordinator. The Financial Management Specialist together with the Procurement Specialist verifies the financial provisions of the complex contracts. The standard contracts are verified only by the Procurement Specialist.
12. The invoices are verified for each Contract who fills in on every invoice the reference number of the related contract and the disbursements percentages applied for payments according to the loan agreement. The Financial Management Specialist also signs every invoice to certify that she/he checked the accuracy of the financial data.
13. Applications for withdrawal are authorized by persons determined by the Ministry of Finance (MoF), considering adequate segregation of duties.
14. The MSE will maintain fixed asset register, and project assets will be accounted for accordingly in such registers. The Directorate will keep records of the invoices related to the purchase of the assets paid from project's funds and of the transfer protocol.
15. MSE established an internal audit department in early 2004 which currently comprises a small number of staff who received training under the EU CARDS project, "Development of PIFC and Internal Audit". To the extent possible reliance will be put on the work done by internal audit.
16. **External Audit.** Project financial audits are to be carried out either by acceptable private sector auditors or by the country's SAO, which is also acceptable to the Bank, under terms of reference acceptable to the Bank. The MSE expressed their interest in engaging the SAO for the conducting project financial audit. To realize this the MSE needs to make an agreement with the SAO for project financial audit. The annual audited project financial statements and the audit reports will be provided to the World Bank within six months of the end of each fiscal year.



- 17. Disbursements and flow of funds.** For disbursements, traditional disbursement methods such as advances, direct payments, and Reimbursements will be used. For such category of expenses, the MoF will open an analytical account in the State Treasury which will be used as a Designated Account (DA) in line with the existing treasury procedures. The loan funds will flow from the Bank through the Croatian National Bank to the DA and via Treasury system and the MSE to contractors based on approved invoices. Such approach was assessed to be acceptable by the Bank. The DA will be denominated in EUR currency. The expenses related to the disbursements of works, goods, consultancy, and non-consultancy services, and incremental operating expenses will be documented using statements of expenditure. The funds for the small grants category will flow from the DA to the final beneficiaries (schools) based on procedure described in the separate Small Grants Manual. Disbursements from such category will be conditioned upon acceptance of the Small Grants Manual by the Bank's team. The ceiling, authorized allocation and supporting documentation for disbursements are further defined in detail in the project Disbursement and Financial Information Letter.
- 18. Retroactive financing.** Notwithstanding the provisions in Table A2.2 below, no withdrawal shall be made:
- (a) for payments made prior to the Signature Date, except that withdrawals up to an aggregate amount not to exceed five million Euro (€5,000,000) may be made for payments made prior to this date but on or after one (1) year prior to the Signature Date, for Eligible Expenditures, subject to the Bank's prior approval of an environmental and social audit conducted by the Working Group of the activity or work proposed for financing; or
  - (b) under Category 2 until the Borrower has developed and adopted, to the Bank's satisfaction, the Small Grants Manual (separate section/chapter of the POM).

**Table A2.2 - Withdrawal of the Proceeds of the Loans and estimated disbursements**

| Category  | Amount of the Loan Allocated (expressed in EUR) | Percentage of Expenditures to be financed (inclusive of Taxes) |
|---|---|--|
| (1) Works, Goods, non-consulting services, consultants' services, Training, and Incremental Operating Costs | 24,000,000                                      | 100%   |
| (2) Small grants for demonstration schools  | 1,000,000                                       | 100%   |
| <b>TOTAL AMOUNT</b>   | <b>25,000,000</b>                               |  |

- 19. Financial Management Conditions and Covenants.** The project implementing entity will maintain a project financial management system acceptable to the Bank. The project financial statements will be audited by independent auditors acceptable to the Bank and on terms of reference acceptable to the Bank. The annual audited statements and audit report will be provided to the Bank within six months of the end of each fiscal year. Semi-annual IFRs will be forwarded to the Bank no later than 45 days after the end of each semester.
- 20. Implementation Support and Supervision Plan.** During project implementation, the Bank will



supervise the project's financial management arrangements in two main ways: (i) review the project's interim un-audited financial reports, as well as the annual audited financial statements and auditor's management recommendation letters; and (ii) perform on-site supervision with the frequency based on the assessed project's risk and performance and review the project's financial management and disbursement arrangements to ensure compliance with the WB's minimum requirements. The on-site supervision will include a review of the following areas of project's financial management: accounting and reporting, internal control procedures and external audits, planning and budgeting, funds flow and staffing arrangements. A sample transactions review will also be conducted. Implementation support and supervision will be performed by the WB-accredited Senior Financial Management Specialist. It is expected that the FMD is granted access to all the necessary documents which support the project transactions made.

21. **Use of country systems.** Where feasible, the project will use elements of country systems in MSE such as: staffing, planning, and budgeting, and partially internal controls and possibly audits. Additionally, the project will use the State Treasury system for holding a designated account.

#### **Procurement Implementation Arrangements**

22. **Capacity Assessment:** The preliminary review of the public procurement system of the Republic of Croatia indicates that it generally complies with the Bank's core procurement principles on value for money, economy, efficiency, integrity, fit for purpose, transparency, and fairness. The public procurement environment in the Republic of Croatia is fully aligned with the EU acquis. E-Procurement in Croatia is advanced and provides a good basis for further developments in transparency through further use of data, integration with other e-government solutions, and deployment of emerging technologies. Positive steps were taken with the development of the contract register, mandatory publication of public procurement plans and the possibility to lodge complaints electronically. Centralized public procurement has been effectively used in the country in the last decade, there is an efficient training and certification program for public officials, working in the field of public procurement, the legal protection for private sector (right to file a complaint, deadlines for complaint both procedural and administrative) and administrative oversight, as well as misdemeanor responsibility of the contracting authority in the public procurement procedure, have been established. The complaints resolution process is streamlined and conducted electronically, and the institution reviewing public procurement complaints is autonomous and independent.
23. As a government institution, the MSE is bound by and follows the national regulations, including for public procurement. It applies them when utilizing funds from the state budget and all EU financial instruments. Within the General Secretariat of the MSE, the General Affairs and Human Resources Department (Service for Property and Technical Affairs and Procurement) is responsible for the public procurement including development, improvement, and coordination of the entire public procurement; issuing opinions, instructions and provision of legal assistance relating to the application of the PPA and other regulations in the field of public procurement. Depending on procedures, other departments participate in preparation and implementation of procurement procedures, namely the Financial Department (Service for Capital Investments and Accounting) and the Service for EU project's contracting and financing. Minister of Science and Education signs contracts on behalf of the Agency. Within the MSE: 14 employees are holding certificates in the field of public procurement. The procurement staff is found to work professionally and is well-organized.



They have attended several trainings.

24. All procurement notices are mandatorily published on the e-procurement portal (EOJN) and on the Ministry's website. All procedures are carried out using the EOJN. For the procurement categories, for which procurement is assigned to the State Office for Centralized Public Procurement (SOCPP), the MSE relies on the FAs concluded by the State Office. As required by the PP Act, the annual procurement plan and its revisions are also published on the e-procurement portal and the Ministry's website<sup>20</sup>. According to the information provided at the EOJN for the MSE,<sup>21</sup> majority of procurement procedures followed Open procedure.
25. The MSE is obliged by the PP Act to follow the procedures stipulated in the Act and conduct all procedures for public procurement contracts electronically, therefore it uses the electronic public procurement portal (EOJN) for all procurement transactions from procurement planning, invitation to bidding stages, and generates reports, which cover information on the entire bidding process. Procurement opportunities, contract award notices and other relevant notices and documents are published online at the EOJN. All documents related to the relevant procurement procedure are available through the EOJN. The reports on evaluation are made available to all bidders. The contract award notices, as well as the contracts are posted on the EOJN. The PP Act requires that all contracts are published and there is a contract register on the EOJN, subject to requirements protecting the confidential and commercially sensitive information.
26. **Procurement Policy and Procedures:** The project will follow the 'World Bank Procurement Regulations for Investment Project Financing (IPF) Borrowers (Forth Edition, November 2020) (Procurement Regulations). National Procurement Procedure (NPP) is one of the options provided by the Procurement Regulations. Approaching the national market, the country's own procurement procedures may be used according to the national public procurement framework. NPP may be applied for selected contracts (most likely majority of them), based on the findings of the Project Procurement Strategy for Development (PPSD) and subject to meeting the requirements of the Procurement Regulations. Based on value and nature of a contract, and where there is a need for international expertise for a specific assignment, international market approach might be more appropriate. The World Bank's 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants', (revised as of July 01, 2016) (Anticorruption Guidelines), will apply to the project.
27. **Publication of procurement notices:** The General Procurement Notice (GPN) and all procurement notices for contracts following international market approach will be published in United Nations Development Business (UNDB) and on the World Bank's external website through STEP. Procurement notices for contracts following national market approach will be published on the electronic system for public procurement, hosted by Narodne Novine at <https://eojn.nn.hr/> and on the website of the Ministry of Science and Education (MSE), and when relevant on the electronic portal of the European public procurement journal - Tenders Electronic Daily (TED) at <https://ted.europa.eu/>.
28. **Use of Systematic Tracking of Exchanges in Procurement (STEP):** In accordance with paragraph 5.9

<sup>20</sup> <https://mzo.gov.hr/pristup-informacijama/javna-nabava/92>

<sup>21</sup> <http://www.revizija.hr/hr/izvjesca/>



of the Procurement Regulations, the World Bank's **Systematic Tracking and Exchanges in Procurement** system will be used to prepare, clear, and update Procurement Plan and conduct all procurement transactions for the project together with the provisions stipulated in the Loan Agreement. It is mandatory for all procurement transactions subject to ex-ante/ex-post due diligence process under the Project. All contracts will thus be recorded in and processed through the Bank's planning and tracking system. This arrangement ensures that comprehensive information – on procurement and implementation of all contracts for goods, works, non-consulting services, and consulting services awarded under the whole Project is automatically available.

29. **Project Procurement Strategy for Development:** The Procurement Regulations require the Borrower to prepare a **PPSD** for each IPF operation. The PSD is instrumental in determining the approach to the market and is the basis for defining the procurement arrangements for the project and for the preparation of the procurement plan. The initial draft of the PSD was prepared during appraisal. The PSD is the basis for the procurement arrangements under the project. The short form of PSD is used and it includes details on Project overview, strategic assessment of the operating context and Borrower's capability to manage procurement, procurement risk analysis, procurement objectives, procurement approach options and recommendations, preferred arrangements for low value low risk contracts. The PSD addresses how procurement activities will support the development objectives of the project and deliver the best value for money under a risk-based approach. It also provides an adequate justification for the selection methods in the Procurement Plan. The level of details and analysis in the PSD are proportionate to the risk, value, and complexity of the project procurement. The PSD also provides information on the procurement specific risks and the proposed mitigation measures. The PSD will be the basis for preparation of the project Procurement plan.
30. **Procurement Plan:** The Procurement Plan covering the first 18 months of project implementation is prepared and agreed at project negotiation. Part of the loan will finance adaptation works, equipment and works supervision contracts for 50 schools. The schools will be selected based on calls for expressions of interest. Therefore, given the demand driven nature of the project, the detailed procurement plan is deferred to project implementation.
31. **Retroactive financing and advance procurement:** may be considered under the Project, subject to the conditions set out in paragraphs 5.1 and 5.2 of the World Bank's Procurement Regulations for Borrowers. In accordance with the Procurement Regulations, the Bank requires the application of, and compliance with, the Bank's Anti-Corruption Guidelines, including without limitation the Bank's right to sanction and the Bank's inspection and audit rights. To ensure compliance with the above provisions in bidding processes that have already been conducted and for which the awarded/signed contracts did not include the relevant fraud and corruption provisions, the MSE have to require such suppliers/consultants and contractors to sign the Letter of Acceptance of the World Bank's Anti-Corruption Guidelines and Sanctions Framework so that these contracts can be eligible for financing under this Project; The Bank will not finance any contracts that do not include the Bank's fraud and corruption-related clauses. The MSE will also provide the Bank with the list of contractors/suppliers and subcontractors/sub-suppliers under these contracts so that the Bank can ensure that the firms chosen are not and were not at time of contract award or signing on the Bank's List of Debarred Firms. Contracts awarded to firms debarred or suspended by the Bank (or those that include debarred or suspended subcontractors/sub-suppliers) will not be eligible for the Bank's financing. The specific contacts, subject to retroactive financing will be included in the Project's procurement plan.



32. **Risk for procurement:** Based on the capacity of the implementing agency and Overall risk analysis overall risk for procurement after mitigation is set to **Moderate**. The procurement specific risks, the proposed mitigating measures and the risk owner are indicated in the PPSD.
33. **Frequency of procurement supervision and oversight:** Based on the capacity of the implementing agency and the *Moderate* risk rate for procurement, procurement implementation support missions will be carried out once a year, and on an as-needed-basis. The procurement plan indicates the review arrangements for each contract to be financed from the loan proceeds. Contracts not subject to prior review by the Bank, will be post reviewed by the Bank's procurement specialist, assigned to the project. Post review of contracts shall be carried out once a year. At a minimum 1 out of 10 contracts will be randomly selected for post review.
34. The implementation support plan identifies the level of technical, fiduciary, and environmental and social support required for successful project implementation, as indicated in table A2.3.

**Table A2.3. Implementation Support Plan**

| Focus  | Skills needed  | Time (per year)  |
|--|--|--|
| Technical and operational support:<br>(i) Improving the learning environment of selected schools<br>(ii) Strengthening of education management systems<br>(iii) Monitoring and evaluation<br>(iv) Overall implementation | - Senior Education Specialist (TTL)<br>- Senior Education Specialist<br>- Education Specialist<br>- Operations Officer<br>- Infrastructure Specialist (architect/engineer) | 12 weeks<br>8 weeks<br>20 weeks<br>10 weeks<br>5 weeks |
| Financial Management support   | Financial Management Specialist  | 4 weeks  |
| Procurement support  | Procurement Specialist   | 4 weeks  |
| Social Development support   | Social Development Specialist  | 4 weeks  |
| Environmental support  | Environmental Specialist   | 3 weeks  |
| Communication support  | Communication specialist   | 4 weeks  |



### ANNEX 3: Institutional challenges of the Croatian education system

| Type of institutional challenge                             |   | Manifestation in Croatia's education system  | What measures/ actions are needed?  | How is the MSE addressing/planning to address the challenge?   |
|---|---|--|---|--|
| Key information is missing                                  | 1 | Lack of timely data on student learning outcomes at key stages of education cycle.   | Systematized and institutionalized formative learning assessments for teachers to measure student progress especially in relation to problem solving.   | MSE in 2018 piloted an external assessment of problem-solving skills in 74 schools.<br><br>MSE has plans to expand assessment in grades [3] and [5], starting with school year [2022/23]. The project will support these efforts by demonstrating how these data can be used to drive better decision making. For instance, an annual progress report on reform implementation will need to analyze and use these data.                |
|   | 2 | Low reliability and availability of key school data for strategic planning.  | Systematized education analytics with specific modules on learning, teaching, and infrastructure for use by school principals and founders in assessing school and founder performance and progress.  | The project will support the National Centre for External Evaluation of Education (NCVVO) to deepen analysis of student learning data and disseminate findings and assist in the creation of a data analysis team within the Directorate for the Support and Improvement of the Education System.  |
| Poor incentives to focus on quality, equity, and efficiency | 3 | Local actors face no incentives to monitor and act regarding quality and equity.   | Strengthen the reporting requirements to drive discussions about performance, inclusion, and institutional change.  | Ongoing strengthening of the assessment center based on a diagnostic of performance and administrative data availability and use. The Project will introduce reporting requirements and provide support through training, coaching, and establishment of institutional guidance to individual groups of stakeholders, such as principals, school founders, MSE staff, and associated agencies on using data to inform decision making. |
|   | 4 | Incentives for local actors to maintain the status quo and the unique but inefficient model of delivering education (in multiple shifts) because this model preserves jobs, and a large network of schools. Change will bring about disruptions and uncertainty. | Create incentives for local authorities to want to move away from the status quo:<br>- Use the infrastructure investments to incentivize local actors to identify local solutions to consolidate their school network<br>- Use a communication campaign to highlight the need to move away from double shifts and short hours, and to address inefficiencies. | The Project will support the MSE in using the large sums of EU funds as an incentive for school founders to begin optimizing their school network.   |
|   | 5 | Funding model finances inputs with no incentives for local actors to worry about costs.  | Introduce new funding system -based on transparent funding formula - that will allow for greater autonomy and accountability of local actors.   | The Project will strengthen MSE's capacity to analyze and coordinate tasks related to financing of education by institutionalizing analytical practices within the Ministry. Support will be provided to the MSE in strengthening financial analytical   |





|  |    |   |  |   |
|--|----|---|--|---|
|  |    |   |  | capacities, which will support the decision making of the MSE leadership.   |
| Insufficient capacity of actors in planning and management | 6  | Insufficient capacity at MSE to plan and execute reform initiatives.  | Build capacity within the MSE and institutionalize mechanisms to enable planning and execution of current and future reforms that will drive institutional change. | Through this Project, MSE will establish a Working Group that will provide hands-on experience with well-coordinated and implemented reforms by placing more emphasis on (i) carefully designing different phases of the reform upfront, (ii) outreach and communication to build alliances for change, and (iii) nudging local actors to act; and placing less emphasis on using laws and regulations to drive change.   |
|  | 7  | School principals lack managerial experience and are disempowered to manage resources and lead schools.   | Expand school autonomy and institutionalize training of principals to lead budget planning, teaching, and the learning process.                                    | Based on a diagnostic of performance and administrative data availability and use, the Project will provide support through training, coaching, and establishment of institutional guidance to individual groups of stakeholders, including principals, on using data to inform decision making.  |
|  | 8  | Teachers lack enough support to transition to modern curriculum and teaching practices.   | Institutionalize tools and measures that will prepare teachers for new curriculums, modern assessment, and introduction of the WDS system.                         | The WDS will entail a major pedagogic transformation of school in line with the new curriculum and paired with newly created training activities and initiatives such as the rollout of formative assessments, the introduction of problem-solving skills as a core of the new teaching, and a new culture of classroom observation and mentorship to improve teaching practices. All these materials will be included in the WDS training manual for teachers. |
| Coordination challenges and insufficient accountability    | 9  | Incomplete decentralization with school founders owning schools but legally disempowered by regulation from making daily operational decisions. | Introduce governance measures that will provide more autonomy for day-to-day operational decisions, raise capacity at the founder level.                           | The project will provide support through training, coaching, and establishment of institutional guidance to individual groups of stakeholders, including founders, on using data to inform decision making. In addition, the existing national-level norms and legislation will be revised, and alternative decentralized solutions devised, that will allow for greater autonomy and accountability for local governments.                                     |
|  | 10 | Insufficient coordination among founders, schools, and the local community  | Institutionalize mechanisms for better coordination between founders and schools and introduce tools for wider community participation.                            | The schools and founders will organize stakeholder consultations themselves, involving the wider community (including parents). This process will ensure coordination and consensus-building among the stakeholders for future school management.   |





## ANNEX 4: Economic and Financial Analysis

### Introduction

1. **The Project will support the rollout of the WDS, which will expand instruction time throughout the school day.** Croatia remains one of the countries with the lowest instruction time in the EU, mostly due to a prevalent two-shift school model, resulting in fewer learning opportunities for all, especially the most vulnerable students. The World Bank project will support the system to meet the necessary condition of single-shift schools for the WDS to be fully operational and hence help Croatia address a historical need in its school system and an anomaly in the EU. To this extent, the compulsory part of the WDS system for grades 1-8 implies that students spend time in school from 8:00 a.m. to 3:00 p.m. for regular instruction hours and other curriculum-related activities (i.e., time for homework, workshops, and organized play). The optional portion of the WDS system will take place from 3:00 p.m. to 5:00 p.m. (see Annex 5 for more details about the WDS model). This will necessitate a major restructuring of the school network. Finally, the World Bank project will prepare administrators, teachers, and learners for the new model, with strong support for the new pedagogy of the WDS system.
2. **This analysis discusses and quantifies, when possible, the costs and benefits derived from the project.** The analysis quantifies the reform and project costs (considering capital and recurrent costs of the new model), and will compare these with the benefits, including savings from the consolidation efficiency gains, learning benefits in terms of quality and equity of the system, further investments that the project will mobilize from other donors, as well as the changing patterns in the labor market due to an expected increase in the labor force participation of parents (mostly mothers) of students affected by the reform.

### Rationale for Public Investment

3. **The provision of education in the Republic of Croatia is mostly assumed by the public sector.** Article 66 of Croatia's constitution states that *"everyone shall have access to education under equal conditions and in accordance with his/her aptitudes,"* and makes clear that education is compulsory and free. In Croatia, more than 95 percent of students attend public schools, demonstrating that the provision of education as well as financing is assumed by the Government.
4. **There is a strong rationale for public investment derived from the existing institutional weaknesses, reform objectives, and equity considerations.** This project will help boost a major government program aimed at solving historical institutional weaknesses while at the same time embarking on a major shift towards more time and better quality of learning. Public investment in infrastructure through the assistance of strategic thinking and planning is needed to help the education system transition from an old-fashioned, inefficient, multiple-shift model to a single-shift, universal, modernized model. Such government reform will reduce current opportunity imbalances in learning time and quality that arise outside the school. From a distributional perspective, the public investment will guarantee better service of a public system during more time for all students all along the day, hence generating better individual, social, and economic outcomes.
5. **Moreover, public investment will strengthen the system's capacity to deliver more efficient service**



**through better management of resources and planning.** The project will address institutional weaknesses related to management capacity of the school network, both at the central level and the level of school founders (entities that are administratively responsible for schools). The project will help the Ministry establish and fund a Working Group to support delivery. It will also provide support in the costing of the reform, including the preparation of the local school network plans. Moreover, the strategic use of information and data will help improve decision making at the central and local level, resulting in better use of public funds.

### **World Bank value added**

6. **World Bank value added derives from the Bank's long-standing experience supporting countries in dealing with institutional weaknesses related to inefficient spending and steering them towards a quality and equity education agenda.** The weaknesses in Croatia's education system will be addressed through the World Bank's long-term expertise and engagement in EU countries. The nature of the reform in Croatia is aligned with the goal of tackling institutional barriers that are hampering quality and equity improvements around the education system. In particular, the WB will help the Government of Croatia implement a thoroughly planned reform in a sustainable way regarding its public finances, while keeping equity as a central policy goal in the reform.

### **Project Development Impact**

7. The PDO is to improve the learning environment in select schools under the WDS system and to strengthen the capacity of the MSE to scale up the WDS system and implement sector reforms. In accordance with this objective, the project will (i) develop a WDS system and refine the model following experiences during initial years of reform, (ii) help expand assessment data and how data are used across the system, (iii) finance expenditures associated with "demonstration school," and (iv) strengthen the Ministry's capacity to implement reforms.

### **Costs of the Whole Day School reform in Croatia**

#### *Quantifying costs of the WDS reform*

8. The Project will support the rollout of the WDS reform, as well as the optimization process of school networks for more efficient service delivery. In particular, the WDS reform and the project involve several categories of costs, which are outlined below. The costs of the reform entail new capital and recurrent costs engendered by the reform, as opposed to the status quo.
9. Both the reform and WB project costs may involve:
  - **Capital investment costs:** adaptation and refurbishment of existing buildings, supervision and project management related to adaptation and refurbishment, equipment, investment in innovative learning spaces for WDS, software, and so forth. For food provision at school, adaptation of existing spaces to accommodate new kitchens and dining rooms are considered.



- **New recurrent costs of schools:** new teachers to be hired, assistant teachers to attend students with special education needs, costs of extracurricular programs. For food provision at school, recurrent costs of kitchen staff and meal subsidies for low-income students.
- **Costs of training** of teachers, principals, school founders, and Ministry of Science and Education staff related to planning and implementation of the reform.
- **ESF implementation** cost including cost of appointment of full-time environmental and full-time social specialists. As ESF and Croatian legislation requirements are, to the large extent, in harmony, most of EHS implementation costs under the Project present regular operating costs of contractors and final beneficiaries.

10. A model was conducted to compute results of costing of the reform. Such model was based on MES data and various assumptions of WDS implementation and construction costs. Costing includes capital long-term investments (over a seven-year period, 2021–27) and recurrent costs (annual), assuming the student population of 2019. In summary, long-term capital investments should account for at least EUR579 million (mostly devoted to construction of classrooms and buildings in current and new schools), whereas annual recurrent costs would account for at least EUR151 million (mostly devoted to required new teachers to meet WDS teaching hours. Such amount in recurrent spending represents a 7.5 percent increase in the education budget.<sup>22</sup>

### Economic benefits of the WDS

11. More importantly, the cost of the WB project is expected to be outweighed by the large benefits arising from several sources:
- **Long-term gains** derived from better student learning outcomes, which will imply better-qualified graduates equipped for higher-paid and more productive occupations.
  - **Short-term gains** such as (i) efficiency gains in the system; (ii) increasing disposable income of parents, especially from low-income households; (iii) increasing maternal labor market participation (hence narrowing the gender gap), boosting GDP, and reducing poverty rates; and (iv) leveraging additional EU funds for reform implementations.

### *Summary of gains and costs*

12. Table A4.1 summarizes the return on investment of the project by 2027, the expected end of the school network optimization. The project will benefit from lower fiscal pressure on education spending through a larger-than-expected population decline for students aged 6–14—fewer students in the next year will imply savings in certain schools. Savings derived from joint population decline and efficiency gains are projected to be EUR296 million to EUR300 million in capital investments and EUR100 million in recurrent costs (approximately 5 percent of the annual education budget). Moreover, 2,300 more skilled graduates per year are expected because of the project, and a 9 percent reduction in the proportion of students not reaching basic skills. Finally, an increase of 5 to 10 percentage points in female labor market participation is expected.

<sup>22</sup> Public expenditure in education in 2017 was close to EUR2,000 million (Eurostat).

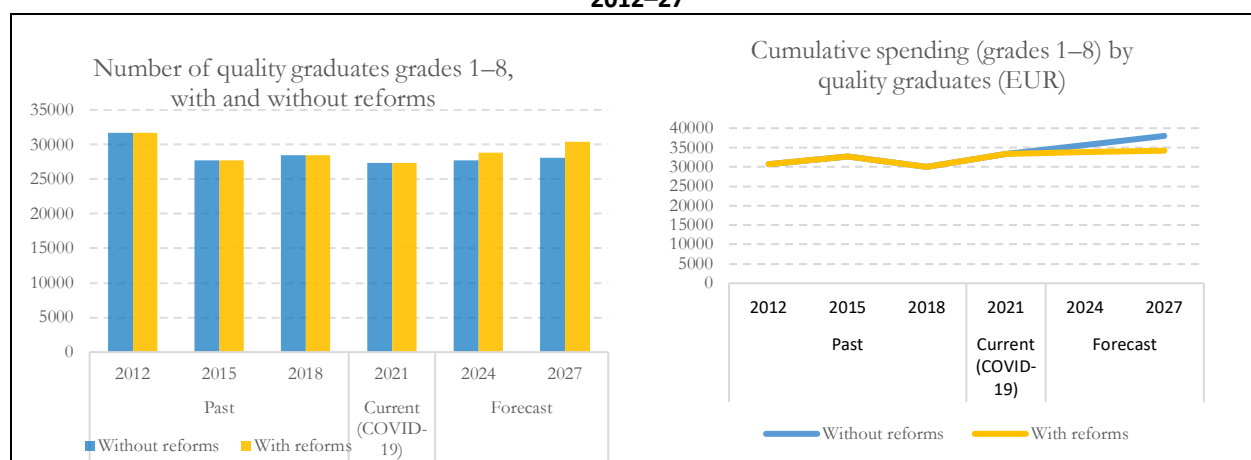


**Table A4.1. Summary of project return on investment by 2027**

|   |  |
|---|--|
| Efficiency Gains (with demographic changes)               | EUR296 million to EUR300 million in capital investments<br>EUR100 million in recurrent education costs (5 percent of budget) |
| Additional Skilled Graduates                              | 2,300 more skilled graduates per year  |
| Learning Outcome Increases, Reduction in the Learning Gap | An increase of 10 PISA points; 9 percent of all students reaching now basic skills   |
| Labor Force Participation of Mothers (and fathers)        | An increase of 5 to 10 percentage points (preliminary, based on literature)  |

13. This project is expected to become a turning point for the education system in Croatia. Croatia's student population has been decreasing in the last decade, especially students in upper grades, and since 2019, the student population in primary grades has been decreasing, as well. This demographic fact is impairing the country's capacity to produce the needed number of skilled workers. Coupled with this, according to the latest PISA 2012, 2015, and 2018 data, the education system is not yet able to provide the relevant skills to between a fourth and a third of the student population. As can be seen, under the WB project, the number of graduates reaching basic skills will increase because of the learning gains observed in 2024 and 2027, resulting in 3,000 more quality graduates per year. Therefore, the cumulative spending per quality graduate will keep a constant path, even after assuming that the proposed reform will incur an increase of 7 or 8 percent in the running cost of education derived from the WDS single-shift model.

**Figure A4.1. Number and quality of graduates and cumulative spending grades 1–8, with and without reforms, 2012–27**



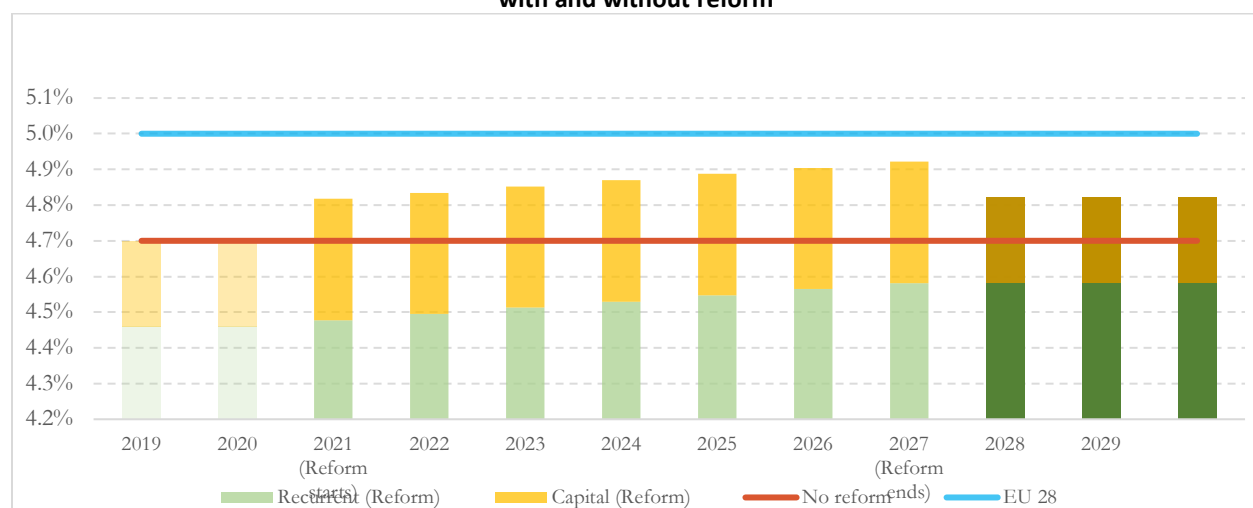
*Note:* Quality graduates are defined as those who achieve basic reading and math skills. Gains are assumed based on previous literature (10 PISA points in both domains, 14 for low-income students, and 6 for high-income students). Spending has been computed based on current student spending, the past evolution of the education budget (see Ministry of Finance), and 2 percent growth projections per year. It assumes a slight decline in 2021 learning outcomes due to the COVID-19 shock.

14. The resulting costs of the reform, after considering demographic changes and discounting savings from potential efficiencies, accounts for EUR283 million in long-term (seven-year) capital investments and an increase in EUR51 million in recurrent costs. This would imply an approximately EUR40 million annual investment in capital expenditures between 2021 (when investments are likely to start) and 2027, a 100 percent increase in capital spending on basic education schools in 2018 (usually EUR40 million per year). On recurrent costs, the increase would entail a 2.5 percent increase in total education public spending (to be reached at the end of the seven-year period), given that current public annual spending in education



is currently close EUR2 billion.<sup>23</sup> Expenditure as a percentage of GDP is 4.7 percent, of which 0.3 percent is devoted to capital expenditures. This would imply an increase of total education spending of 5 percent during implementation (2021–27) and 2.5 percent after implementation.<sup>24</sup> As a share of GDP, spending will go up progressively from 4.7 percent to 4.9 percent in 2027 (reaching the EU-28 average) and thereafter decrease up to 4.8 percent given the end of capital investments. These results are significantly lower relative to Silva (2007), who finds a 10 percent increase in instruction time with a 7 percent increase in costs. For a lower increase in recurrent costs (2.5 percent), instruction hours are expected to increase by 80 percent in grades 1–4 and by 33 percent in grades 5–8.

**Figure A4.2. Expenditure in education as a percent of GDP, recurrent and capital expenditures, with and without reform**



Sources: World Bank staff based on MES data and MoF.

### *Long-term economic gains derived from learning gains in basic skills*

15. Benefits are expected from increased learning outcomes (and implicitly years of schooling) derived from more time for learning and better teaching and learning interactions at school. Learning outcomes and increases in years of schooling would then increase Learning-Adjusted Years of Schooling (LAYS) in Croatia, which in turn would increase the expected returns to education in adult life and to overall economic growth. Estimates of increased learning outcomes are based on estimations from Lavy (2015) and Rivkin and Schiman (2015) for a sample of more than 50 countries, which show a positive increase of learning outcomes that are decreasing per additional hour. Given the current low number of hours in Croatia, the potential to reach such a nonlinear trend is far from the average effect,<sup>25</sup> resulting in an average increase of 10 PISA points (in reading, math, and science), which is equivalent to 0.25 years of schooling per student. Following Lavy (2015), the impact would be different by socioeconomic groups, with the effect on students from low education groups being up to 14 points, and 6 points for high parental education

<sup>23</sup> Assuming constant prices.

<sup>24</sup> In practice, capital (2021–27) and recurrent spending (permanent after 2027) add up to EUR 90 million, approximately 4.5 percent of the budget, and are only computed simultaneously in 2027 (capital investments decrease to normal values after 2027, whereas recurrent spending increases gradually between 2021 and 2027), hence constituting an upper bound estimate.

<sup>25</sup> An increase of two hours per key competence in primary school (out of an increase of 10 hours) and an additional one hour per key competence in lower secondary (out of an increase of 5 hours) can be expected. This would entail an average increase of 1.5 hours per domain in basic education and, hence, an overall increase of 10 PISA points in all three domains.



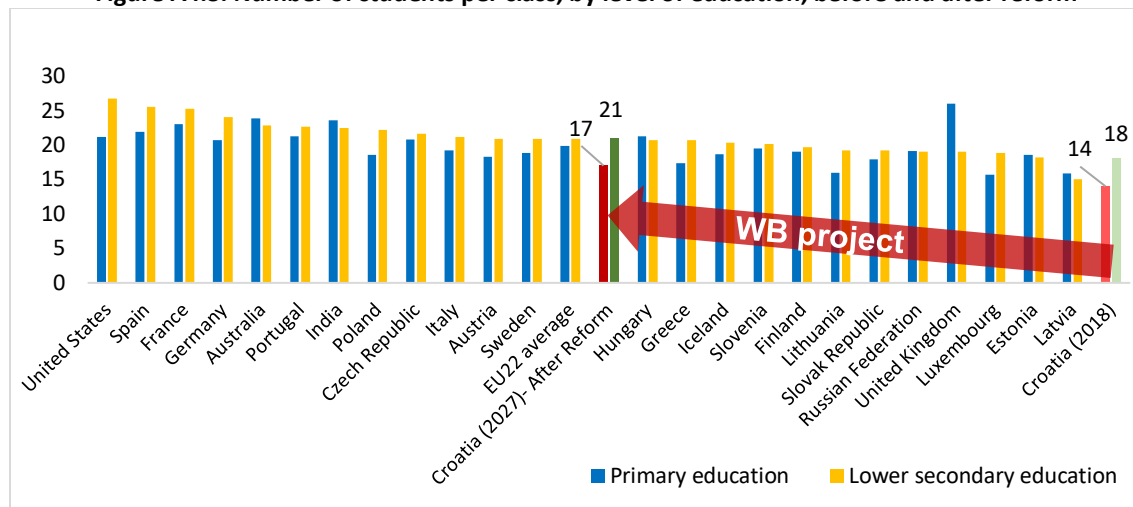
groups. According to Hanushek and Woessmann (2014), such a change could account for 131 percent of current GDP (currently EUR45 billion), or a 2.7 percent discounted future GDP. It is expected that the long-run growth rate would increase by 0.19 percent per year. Moreover, student inequities would be reduced because of the nonlinear effects for more vulnerable students.

### *Individual and economic benefits beyond basic skills*

16. This resulting economic estimation represents aggregate macroeconomic gains derived from macroeconomic models relating to learning outcomes and economic growth. However, it is also important to distinguish the drivers of such gains from individual and societal benefits estimated from the microeconomic-related literature. What follows is a discussion of expected gains by students and society, beyond learning outcomes.

- *Efficiency gains.* The reform (and hence the WB project) will contribute to efficiency gains across the education system, by increasing school and class size through class consolidation, hence reducing long-term capital investments and annual recurrent costs. The consolidation of the school network (through the elimination of classes) will reduce the number of classes by 15 percent, and hence will increase class size by the same proportion, from 14 to 17 students in grades 1–4 and from 18 to 21 students in grades 5–8. With respect to the EU average, this would narrow the gap for grades 1–4 (although the difference would still be relevant) but would close the gap completely for grades 5–8 (figure A4.3).

**Figure A4.3. Number of students per class, by level of education, before and after reform**



Sources: OECD (2014); and WB based on Croatia 2018 MSE data.

17. The consequence of this is the mobilization of teacher and classroom reserves that will be used for expanding instruction time and eliminating multiple shifts. Moreover, monitoring devices to track student key indicators will be used in parallel with the rollout of WDS reform so that a more efficient school management and improved service delivery is expected. A simulation costing model was conducted to estimate potential savings, with assumptions regarding legal constraints on class size or savings within the same local administrators of schools (school founders). A technical assessment on current infrastructure and recent infrastructure projects in Croatia analyzed potentially available classroom space and kitchen



needs. In addition, the savings are expected to take place because of school class consolidation, leading to an overall increase in class size across the country. Results depict large potential savings from class consolidation from seven-year capital investments (using 2019 data as a baseline) and annual recurrent investments. In fact, 51 percent of capital investment costs would be saved out of the efficiency gains and demographic declines, whereas 65 percent of recurrent costs would be saved through class consolidation and demographic declines. New construction of classrooms is divided into classroom conversions and construction of new classrooms, which can be described as follows:

- i. **A classroom conversion** represents all those investments where the existing space will be rearranged to be used as a classroom. This may in some cases mean only changing the furniture, in other cases it may mean adding new walls or removing them, adding toilets, adding, or changing windows, and so forth. The estimation for this cost was done having that in mind and having some real data on costs we obtained from the Ministry. One conversion per school needing space is assumed to be possible.
  - ii. **Construction of new classrooms** means classrooms that are newly constructed in building extensions, new buildings, or new schools. These include all the needed costs for a certain type of investment, meaning not just a bare space of the classroom, but also corridors, closets, toilets, or, for example, with newly built schools, sports halls and kitchens as the law requires.
- *Years of schooling:* The WDS will contribute to reducing the probability of dropping out of school in secondary education, increasing educational attainment, and raising future earnings.<sup>26</sup>
  - *Maternal labor market participation gains:* The WDS rollout displays potential positive associations with female employment and narrowing of the gender labor and income gaps. Women with children aged 6–14 are more likely to be unemployed if their children attend school for five or less hours, compared to those with children attending to school for more than five hours. Similarly, women who have children attending longer school days are more likely to be working. Based on a modelling exercise,<sup>27</sup> large gains are found with the introduction of WDS for all children, as this would be associated with a decrease of 8.6 percent in the probability of unemployment for women with children age 6–14, and an increase of 6 percent in the total working population.<sup>28</sup> On average, mothers with children attending five or less school hours a day will work 3.7 more hours, concentrated among those 6 percent who are expected to start working. Because of more mothers generating income from paid work, the gender income gap is expected to be reduced by 3 percentage points.<sup>29</sup>

<sup>26</sup> Pires and Urzua 2010; Dominguez and Ruffini 2018.

<sup>27</sup> A modelling analysis was conducted to better understand the relation between school hours of instruction and labor force participation. Data from the EU-SILC survey allow us to identify information on children at the household level and link it to their age and hours at school (either less than five hours or five hours or more). Focusing on households with children aged 6–14 (the population for which the reform aims to intervene) and using the variable on hours at school (that is, the policy of interest), the model addresses the potential effect of the rollout of Whole Day School on labor force participation and its gender implications. A pooled sample for 2014 to 2017 was constructed to obtain an adequate number of observations. Year fixed effects were included in the model.

<sup>28</sup> Both effects are statistically significant.

<sup>29</sup> Assuming mothers before Whole Day School not working have zero income.





- *Increases in parents' disposable income:* The reform and the Project will have a positive effect on the disposable income of parents. Expanded subsidized school meals will reduce food costs. More instruction hours and dealing with homework in the school will reduce the need for private instruction and reduce the associated costs. Finally, extracurricular activities will be organized at school, reducing family private expenditures. The increase in the disposable income of parents is expected to take the form of nonlinear improvements that will promote more equity in the system, as it is low-income households that will benefit the most from the Project.
- *Mobilization of new resources (Next Generation EU) from the WB project:* The WB project will provide a high-quality and cost-effective blueprint and technical assistance for a reform that is needed to improve the quality, efficiency, and equity of education in Croatia. Moreover, it will co-finance some of the interventions at the critical initial stages. As such, it will strongly contribute to the mobilization of additional resources from the EU Recovery and Resilience Facility (considering the COVID-19 crisis), the European Regional Development Fund, and the European Social Fund, which will be necessary for the completion of the WDS reform across Croatia.

### *Benefit-to-Cost Analysis*

18. **The economic analysis uses a cost-benefit economic model to account for the gains from WDS.** The model accounts for the economic long-term returns generated because of the skills increase derived from better learning outcomes, and from the cash flow generated by a short-term parental (especially maternal) increase in labor force participation. The underlying assumption is that the rollout of the WDS system will entail better learning opportunities for all students in the system and will allow parents to engage in full-time work opportunities. Better learning opportunities will lead to more economic growth in Croatia over the long term, whereas higher labor supply will lead to larger individual gains.
19. **The parameters of the model are derived from the empirical microeconomic literature and from policy research conducted by the World Bank.** The economic analysis presents the impact of the project interventions over a period of 20 years. It considers gradual implementation of WDS across years and extrapolates them to results and benefits based on the exposure of students to WDS starting in 2021. It calculates the NPV of the benefits and costs associated to the project. Different parameter estimates are used in a sensitivity analysis to check the robustness of the findings.
20. **Benefits are assumed to be related to learning gains and maternal labor force participation, whereas costs are derived from direct and indirect project costs.** Benefits are computed based on (i) expected learning gains by increasing instruction time<sup>30</sup> and its impact on macroeconomic gains<sup>31</sup>; and (ii) gains from the increase in maternal labor force participation derived from households benefiting from WDS implementation.<sup>32</sup>

<sup>30</sup> Lavy 2015.

<sup>31</sup> Learning gains are hence translated into macroeconomic gains over the long term, in an estimated 80-year period, based on Hanushek and Woessmann (2015), who estimate a 328 percent of current GDP gain after an increase of 25 PISA points. GDP in Croatia is approximately US\$50 billion. The long-term gains are distributed proportionally in the 20-year period of analysis, hence, only part of such gains is considered in the analysis.

<sup>32</sup> Parameters are derived from a modelling exercise: a 6 percent increase in work for mothers in households with children attending five or less hours of school, and a 1 percent decrease for fathers. Data on population structure are used to compute the total number of mothers and fathers in these households, combined with population projections.





21. **Costs are computed from the aggregation of direct project costs (mostly devoted to infrastructure) and indirect capital and recurrent costs associated to the project.** Capital investments associated to the project are estimated to be US\$48 million<sup>33</sup> (EUR40 million, based on the costing model<sup>34</sup>) for seven years up to a total of EUR280 million (US\$336 million),<sup>35</sup> whereas annual recurrent costs are estimated to be US\$60 million (EUR50 million, based on the costing model). The project assumes US\$30 million out of the capital (US\$15 million) and other investments during the first five years, whereas the rest is considered indirect costs. Both numbers assume class consolidation takes place because of project implementation. The discount rate is assumed to be 5 percent, and three scenarios are considered to compute the model—an optimistic one, a pessimistic one, and a baseline scenario (table A4.2).

**Table A4.2. Three scenarios to compute model results of benefit to cost (in US\$)**

|  | Baseline scenario | Low scenario     | High scenario    |
|--|-------------------|------------------|------------------|
| Student achievement (PISA points increase) because of increased instruction time (based on Lavy 2015 and Rivkin et al. 2015) | 10                | 5                | 15               |
| Economic returns because of learning gains—long term (based on Hanushek-Woessmann 2015)                                      | \$65,600,000,000  | \$32,800,000,000 | \$98,400,000,000 |
| Average salary (US\$)—Females  | \$9,000           | \$6,000          | \$12,000         |
| Average salary (US\$)—Males  | \$12,000          | \$9,000          | \$15,000         |
| Children aged 6–14 per household   | 1.4               | 1.20             | 1.6              |
| Share of mothers with children attending 5 or less hours   | 0.7               | 0.7              | 0.7              |
| Share of mothers not working under non-WDS joining work  | 6 percent         | 6 percent        | 6 percent        |
| Share of fathers not working under non-WDS abandoning work   | 1 percent         | 1 percent        | 1 percent        |
| Annual capital investments needed per year 2020–27   | \$48,000,000      | \$48,000,000     | \$48,000,000     |
| Recurrent costs needed per year after WDS implementation   | \$60,000,000      | \$60,000,000     | \$60,000,000     |

22. **Table A4.3 shows the NPV, the benefit-to-cost ratio, and the associated IRR of the total quantifiable benefits and costs associated with the project.** The analysis accounts for the project direct costs, indirect capital and recurrent costs, and long-term gains associated to better learning and maternal labor force participation. The NPV of benefits minus costs ranges from US\$3.8 billion to US\$12.5 billion, with a central scenario of US\$8.1 billion. Finally, the benefit-to-cost ratio is estimated to be 8.9 with a low-case scenario of 4.1 and a high-case scenario of 13.7. The IRR is estimated to be 34.1 percent for the baseline scenario, 20.6 percent for the low-case scenario, and 45.2 percent for the high-case scenario. These results show the resulting project is a highly promising investment in basic education in Croatia.

**Table A4.3. NPV, benefit-to-cost ratio, and IRR of quantifiable benefits and costs associated with the project**

<sup>33</sup> The assumed exchange rate is US\$1.20 per EUR (February 2021).

<sup>34</sup> This includes cost of additional teaching time, assistant teachers, meal costs, and hiring cooks.

<sup>35</sup> It is assumed that the reform covers the whole country in seven years.



| <b>Benefits (US\$)</b>                      | <b>Baseline</b>        | <b>Low</b>             | <b>High</b>             |
|---|------------------------|------------------------|-------------------------|
| <i>Economic returns from learning gains</i> | \$14,283,970,037       | \$7,141,985,019        | \$21,425,955,056        |
| <i>Increased earnings of parents</i>        | \$1,221,762,462        | \$868,152,000          | \$1,524,857,143         |
| <b>NPV of total benefits (20-year)</b>      | <b>\$9,057,660,018</b> | <b>\$4,679,218,401</b> | <b>\$13,406,572,485</b> |
| <b>Costs (US\$)</b>                         |                        |                        |                         |
| <i>Direct project costs—5-year</i>          | \$110,000,000          | \$110,000,000          | \$110,000,000           |
| <i>Indirect project costs (capital)</i>     | \$306,000,000          | \$306,000,000          | \$306,000,000           |
| <i>Indirect project costs (recurrent)</i>   | \$1,066,067,416        | \$1,066,067,416        | \$1,066,067,416         |
| <b>NPV of total costs (20-year)</b>         | <b>\$900,918,796</b>   | <b>\$900,918,796</b>   | <b>\$900,918,796</b>    |
| <b>NPV (benefits minus costs)</b>           | <b>\$8,156,741,221</b> | <b>\$3,778,299,605</b> | <b>\$12,505,653,689</b> |
| <b>Benefit-to-cost ratio</b>                | <b>9.05</b>            | <b>4.19</b>            | <b>13.88</b>            |
| <b>IRR</b>                                  | <b>34.4 percent</b>    | <b>20.8 percent</b>    | <b>45.5 percent</b>     |

| <b>Benefits (US\$)</b>  | <b>Baseline</b>        | <b>Low</b>             | <b>High</b>             |
|---|------------------------|------------------------|-------------------------|
| <i>Economic returns from learning gains</i>                           | \$14,283,970,037       | \$7,141,985,019        | \$21,425,955,056        |
| <i>Increased earnings of parents</i>                                  | \$1,221,762,462        | \$868,152,000          | \$1,524,857,143         |
| <b>NPV of total benefits (20-year)</b>                                | <b>\$9,057,660,018</b> | <b>\$4,679,218,401</b> | <b>\$13,406,572,485</b> |
| <b>Costs (US\$)</b>   |                        |                        |                         |
| <i>Direct project costs—5-year (capital and technical assistance)</i> | \$30,000,000           | \$30,000,000           | \$30,000,000            |
| <i>Indirect project costs (capital)</i>                               | \$321,000,000          | \$321,000,000          | \$321,000,000           |
| <i>Indirect project costs (recurrent)</i>                             | \$1,066,067,416        | \$1,066,067,416        | \$1,066,067,416         |
| <b>NPV of total costs (20-year)</b>                                   | <b>\$913,907,226</b>   | <b>\$913,907,226</b>   | <b>\$913,907,226</b>    |
| <b>NPV (benefits minus costs)</b>                                     | <b>\$8,143,752,791</b> | <b>\$3,765,311,175</b> | <b>\$12,492,665,259</b> |
| <b>Benefit-to-cost ratio</b>  | <b>8.91</b>            | <b>4.12</b>            | <b>13.67</b>            |
| <b>IRR</b>  | <b>34.1 percent</b>    | <b>20.6 percent</b>    | <b>45.2 percent</b>     |



## ANNEX 5: Whole Day School (WDS) Model, Grades 1–4 and 5–8

1. **WDS system in primary grades 1–4.** The WDS system will consist of mandatory and optional elements. As is common in other EU member countries, the Croatian WDS system will be composed of compulsory lessons and an optional part beyond mandated school hours that comprises extracurricular activities. All students will participate in the compulsory or mandatory portion of the school day, while participation in the optional (noncompulsory) portion of the day will be decided by students and families. Therefore, some students will leave school after the compulsory classes are over, while others will stay longer in school. All schools participating in the WDS system will be required to offer the optional noncompulsory portion of the school day.
2. The compulsory part of the WDS system includes two types of learning activities: regular instruction hours and other curriculum-related activities (for example, time for homework, workshops, and organized play). The WDS system implies that children spend time in school from 8:00 a.m. to 3:00 p.m. (or 8 units of 45 minutes with breaks) One of the units is related to lunch, as a warm meal option will be provided to all students. The compulsory portion of the WDS system will be led by school employees, who will have flexibility on how to organize classes and activities in this period.
3. The optional portion of the WDS system will take place for two hours per day, or 10 hours per week, in the 3:00 p.m. to 5:00 p.m. period. All schools must offer options to all students in this period, delivered directly by the school, though the hiring of additional professionals, or in partnership with other organizations, including local civil society organizations. Students are free to participate or not in these optional learning hours. Examples of organizations that local school authorities might want to partner with include but are not limited to sports clubs and nonprofit organizations focused on music and arts, IT, cultural activities, and foreign languages schools. Schools will define their offerings based on the interests of students and parents, the options available locally, and school preferences and capabilities.
4. **WDS system in primary grades 5–8.** The WDS system in the higher grades of primary school will be organized similarly to the model implemented in the lower grades of primary school. Students in grades 5–8 will also be required to be in school for 35 hours per week, but the ratio between the regular instruction hours and other curriculum-related activities will likely be different for students in the higher grades. During the project's initial year, the design of the WDS system for grades 5–8 will be completed. The design of additional hours will be guided by the goal of improving students' basic literacy and strengthening problem-solving and "learning to learn" competences.
5. Adjustments to the curriculum will be necessary to account for increased hours. Additional time in school will allow for an increase in active learning (time-on-task) and developing more in-depth learning outcomes. Given the additional support to be made available for students through extended instructional time, the need for out of school support (for example, additional private classes paid by some parents) and the amount of homework are also expected to decrease.



ANNEX 6: Map of Croatia

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