

The European Pollutant Release and Transfer Register

– A Case Study of Bosnia-Herzegovina –

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A. Introductory Remarks

The 2000 European Pollutant Emission Register (EPER)¹ of the European Union (EU) has been expanded into a wider European Pollutant Release and Transfer Register (E-PRTR).²

Recommended under Agenda 21³ of the 1992 Rio Conference on Environment and Development, pollutant release and transfer registers are in operation throughout the globe, though they are a relatively new policy measure in many countries.⁴

The EU's PRTR Regulation⁵ entered into force on 24 February 2006 twenty days after publication in the Official Journal. Such expansion of the EPER database, the EU's forerunner to the E-PRTR, is on account of full ratification by the EU of the UNECE⁶ Kiev Protocol⁷ on pollutant release and transfer registers.⁸

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¹ European Pollutant Emission Register (EPER) mandated through EPER Decision 2000/479/EC of 17 July 2000 on the implementation of a European pollutant emissions register (EPER) according to Article 15 of Council Directive 96/61/EC concerning integrated pollution prevention and control (IPPC).

² The Organisation for Economic Cooperation and Development (OECD) defines a Pollutant Release and Transfer Register (PRTR) as a catalogue or register of potentially harmful pollutant releases or transfers to the environment from a variety of sources. OECD, *Pollutant Release and Transfer Registers (PRTRs) a tool for environmental policy and sustainable development*. OECD Guidance Manual for Governments (1996).

³ See in particular, Chapters 19, 20 & 21.

⁴ See further, C. Kolominskas & R. Sullivan, *Improving Cleaner Production Through Pollutant Release and Transfer Register Reporting Processes*, 12 *Journal of Cleaner Production* 713 (2004).

⁵ Council Regulation 166/2006, OJ 2006 L 33/1 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC.

⁶ United Nations Economic Commission for Europe.

⁷ The Kiev Protocol is the first legally binding international instrument on pollutant release and

Annual reporting under the E-PRTR scheme will commence in 2009 based on 2007 data.⁹ The Commission, with the assistance of the European Environment Agency, is required to incorporate Member States' national data into the E-PRTR within 21 months after the end of the first reporting year.¹⁰

Article 1 states the aim of the Regulation as one that “establishes an integrated pollutant release and transfer register at Community level (hereinafter ‘the European PRTR’) in the form of a publicly accessible electronic database and lays down rules for its functioning, in order to implement the UNECE Protocol on Pollutant Release and Transfer Registers (hereinafter ‘the Protocol’) and facilitate public participation in environmental decision-making, as well as contributing to the prevention and reduction of pollution of the environment.”

Availability of data can advance not only environmental protection objectives but engender improved human health, lead to industrial innovation, advance technological progress and cleaner production, and may over time, result in cost savings to industry and government. Though in 2003 Saarinen observed that “there are currently no internationally agreed principles or a comprehensive strategy for production of emission data at the level of an industrial installation”¹¹ the Kiev Protocol, and more importantly for our purposes the E-PRTR Regulation, go some way to addressing this deficit. Mandatory reporting to PRTRs has been recognised as providing the impetus to reduce industrial emissions in the USA and Canada.¹² Further, Kolominskas and Sullivan assert that existing PRTRs have

transfer registers – see UNECE website: <http://www.unece.org/env/pp/prtr.htm>. It is the Protocol to the 1998 UNECE Aarhus Convention Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.

⁸ Council Decision 2006/61/EC of 2 December 2005 on the conclusion, on behalf of the European Community, of the UN-ECE Protocol on Pollutant Release and Transfer Registers, OJ 2006 L 32, ratifies the UN PRTR protocol on behalf of the EU (with the exception of Malta and Slovakia) which signed the protocol on 21 May 2003.

⁹ See Article 7(2). Note that it is the responsibility of Member States to set a deadline by which the operators have to provide this information.

¹⁰ Article 7(3)(a) of E-PRTR Regulation.

¹¹ K. Saarinen, *A Method to Improve the International Comparability of Emission Data from Industrial Installations*, 6 (4) *Environmental Science & Policy* 355 (2003).

¹² K. Harrison & W. Antweiler, *Environmental Regulation vs. Environmental Information: A View from Canada's National Pollutant Release Inventory*, presented at the Annual Meeting of the British Columbia Political Science Association (2001) (revised and published. Available on-line at: <http://www2.arts.ubc.ca/cresp/enviro.pdf#search=Environmental%20Regulation%20vs.%20Environmental%20Information%3A%20A%20View%20from%20Canada%E2%80%99s%20National%20Pollutant%20Release%20Inventory>). The authors cite that from the introduction in 1988 in the USA of the Toxic Release Inventory (TRI) to 1995, total releases and transfers reported to the US TRI declined by 46% and 36% respectively (citing Th. E. Natan Jr. & C. G. Miller, *Are Toxic Release Inventory Reductions Real?*, 3(8) *Environmental Science and Technology*, 368A–374A (1998)). They further state that releases reported to the Canadian National Pollutant Release Inventory, established in 1993, declined by 36% in the first three years alone. The USA Environmental Protection Agency runs the Toxics Release Inventory:

a publicly available EPA database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered

been recognised by many, including industry, as providing impetus for firms to reduce emissions and to identify cost-effective cleaner production measures.¹³

As a signatory to the Kiev Protocol¹⁴ and potential EU candidate country, transposition of the E-PRTR Regulation provides an opportunity for Bosnia and Herzegovina (BiH) to commence some preliminary steps towards EU approximation. This paper explores the merits, largely environmental but also political, of implementation of the E-PRTR Regulation in BiH and critiques some initial steps that need to be taken for development and implementation of said Rulebook.

Currently there are functioning internal ‘pollutant registers’ (largely in paper form) in operation in the Federal Ministry of Physical Planning and Environment and the Republic Ministry of Physical Planning, Civil Engineering and Ecology in BiH which contain some information related to industrial permitting. Reports on pollution loads from industrial enterprises expressed as population equivalent (‘EBS’ reports) are also available at the Library of Hydro-Engineering Institute in Sarajevo. Nevertheless, these ‘databases’ would benefit from the proposals advanced in this paper.

I. The Scope of this Paper

This paper comments on legal and policy capacity building that would be required to implement a pollutant release and transfer register in BiH. This includes: a description of the main elements of the founding European Commission Decision on the European Pollutant Emission Register (EPER)¹⁵ and the key EPER requirements including a brief outline of how the ‘database system’ was originally designed; a summary of the changes that the E-PRTR introduced and which build upon the EPER foundations; a detailed summary of the key ‘stages’ of EPER and the additional ones imposed by the E-PRTR that the BiH Competent Authorities would be advised to follow.

Analysis of the respective Framework Laws on Environmental Protection in the Federation of BiH and Republika Srpska is undertaken to a limited extent to determine which data/reporting obligations exist and to identify the legal bases for the implementation of E-PRTR through the development of national register(s).

industry groups as well as federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990

see <http://www.epa.gov/tri/>.

¹³ *Supra* note 4, at 723.

¹⁴ The Protocol on Pollutant Release and Transfer Registers was adopted at an extra-ordinary meeting of the Parties to the Aarhus Convention on 21 May 2003. The meeting took place in the framework of the fifth *Environment for Europe* Ministerial Conference, Kiev, 21-23 May 2003. 36 States and the European Community signed the Protocol in Kiev. Bosnia and Herzegovina signed the Kiev Protocol on 21 May 2003.

¹⁵ Commission Decision 2000/479/EC of 17 July 2000, OJ 2000 L 192/36, on the implementation of a European pollutant emission register (EPER) according to Article 15 of Council Directive 96/61/EC concerning integrated pollution prevention and control (IPPC).

This paper further attempts to provide an outline of potential practical considerations in terms of how a national PRTR might be structured and its scope. Moreover, this paper offers justification for providing a harmonised approach to the creation of a Rulebook on Installations and Pollution Register in each of the BiH Entities: an approach that might bring the Entities closer together.

II. Relevant Historical and Political Underpinnings in BiH

A former unit of the ex-Socialist Federal Republic of Yugoslavia, the State of Bosnia and Herzegovina is 11 years post devastating inter-ethnic conflict. In brief, at the end of the conflict, for political and peace-seeking reasons, it was deemed appropriate to maintain BiH as a geographically unified State with separate political Entities: the Federation of Bosnia Herzegovina and the Serb Republic (respectively Fed-BiH and Republika Srpska or collectively 'the Entities'), and a self-governing District of Brčko. Subsequently, the entire State of BiH has been subject to the ultimate authoritative governance of the High Representative of the international community since the signing of the Dayton Peace Agreement¹⁶ at the end of the conflict. Brčko is administered by the international community with an international Supervisor¹⁷ as head. It is without doubt that such decentralisation and distinct administrative arrangements pose particular challenges for environmental law-making and governance, some of which are noted in this paper.

The Dayton Peace Agreement (the Agreement) has remained a controversial solution since its inception (though arguably a credible option at the time). The Agreement poses potential problems for BiH as far as European integration is concerned due to its own non-integrating nature. Revisions to the Dayton Agreement have been planned in order to advance reforms which may assist in generating some degree of centralisation within the State, particularly at the level of the army and police force and other State-level institutions in an attempt to create cohesion between the Entities. It is hoped that some form of centralisation will also take place within the sphere of environment (discussions for a State-level Environment Agency have taken place) and this paper addresses some issues that might go some way to encouraging this.

Of relevance for our purpose, the Entities are advancing an environmental protection mandate with the assistance of external donors, including the European Union. As a State, an ultimate objective is that one day BiH might accede to the European Union. 'Sustainable development' is one of the post-war priorities linked to the re-development and re-building of the State. Noting that the EU is a funder of environmental capacity-building projects in BiH, particularly under the EU

¹⁶ Known also as the Dayton Peace Accords, this is the General Framework Agreement for Peace in Bosnia and Herzegovina of 14 December 1995 agreed in Dayton, Ohio, USA which signified the end of the Yugoslav War. It was agreed between the Republic of Bosnia and Herzegovina, the Republic of Croatia and the Federal Republic of Yugoslavia with the assistance of the international community.

¹⁷ The Deputy High Representative. At the time of writing, the Supervisor is Dr Raffi Gregorian.

CARDS Programme¹⁸ and that BiH is a European country in what was formerly the booming Federal Peoples' Republic of Yugoslavia, it is not unrealistic to assume that BiH will one day follow Slovenia, Croatia and Macedonia (FYR)¹⁹ to the ranks of eventual EU Membership. Hence, the State, while not administratively unified, is aspiring to uniformity via environmental law development that mirrors EU standards and may lead to some form of political cohesion.

III. Eventual EU Membership

Integration of State-level institutions and concurrent law reform will *inter alia* help pave the way for BiH to potential EU candidacy with accession to the EU anticipated for the mid-2010s.²⁰ A 2005 European Commission ('the Commission') Feasibility Study²¹ outlined that, in general terms, State-Entity and inter-Entity co-ordination should be improved. In this regard, BiH was, and is, encouraged to continue undertaking reform in the areas of administrative law and institutional development and strengthening.

The potential accession of BiH to the EU is underpinned by the EU's Enlargement policy, defined by Article 49 of the Treaty on European Union which specifies the conditions of application for EU membership.²² On 21 November

¹⁸ Community Assistance for Reconstruction, Development and Stabilisation (CARDS) programme adopted with Council Regulation (EC) No 2666/2000 of 5 December 2000.

¹⁹ Bosnia-Herzegovina is the last former Yugoslav country to open SAA talks with the EU. Slovenia has been a full EU member since 1 May 2004; Croatia is a candidate country having commenced formal membership negotiations in October 2005 and (Former Yugoslav Republic of) Macedonia gained candidate country status on 17 December 2005. Serbia-Montenegro launched SAA talks in October 2005. SAA negotiations were halted with Serbia and Montenegro on May 3 2006 due to lack of co-operation over war crimes. See <http://www.eudelyug.org/en/news/news/final20060503/final20060503.htm>; Montenegro since seceded from Serbia in late May 2006 <http://www.euractiv.com/en/enlargement/montenegro-independence-bid-confirmed/article-155507>. On 24 July 2006, the EU Council adopted a negotiating mandate for a Stabilisation and Association Agreement (SAA) with Montenegro. See http://ec.europa.eu/enlargement/montenegro/key_events_en.htm Finally, SAA talks will be reopened with Serbia following the arrest of alleged war criminal Zdravko Tolimir on 31 May 2007. See EurActiv at <http://www.euractiv.com/en/enlargement/green-light-eu-serbia-association-talks/article-164216>. Websites last accessed on 11 June 2007.

²⁰ On 18 November 2003 the European Commission published a Feasibility Study which reviewed Bosnia and Herzegovina's (BiH) readiness to open negotiations on a Stabilisation and Association Agreement (SAA) with the European Union. The Commission Feasibility Study recommends to the Council whether and under what conditions SAA candidate country negotiations can start for BiH. Brussels, 18.11.2003 COM(2003) 692 final *Report from the Commission to the Council on the preparedness of Bosnia and Herzegovina to negotiate a Stabilisation and Association Agreement with the European Union* http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!CELEXnumdoc&lg=en&numdoc=503DC0692. Website last accessed on 11 June 2007.

²¹ Communication from the Commission to the Council on the progress achieved by Bosnia and Herzegovina in implementing the priorities identified in the *Feasibility Study on the preparedness of Bosnia and Herzegovina to negotiate a Stabilisation and Association Agreement with the European Union* (COM (2003) 692 final). http://eur-lex.europa.eu/LexUriServ/site/en/com/2003/com2003_0692en01.pdf. Websites last accessed on 11 June 2007.

²² Any European State which respects the EU's fundamental democratic principles may apply to become a member of the Union as per Articles 49 and 6 of the Treaty on European Union. The EU

2005, the Council of the European Union authorised the European Commission to commence negotiation of a Stabilisation and Association Agreement (SAA) with BiH at the earliest opportunity.²³ An SAA agreement is intended to help BiH prepare for future EU membership by introducing EU rules in various fields well in advance of accession, including those in the environmental sector and SAA negotiation talks with the Commission commenced on 25 January 2006.²⁴

IV. The Role of Environmental Law as a Unifying Medium

One means of advancing objectives towards centralisation and of generating unifying State-focussed dialogue amongst governmental representatives and members of the public, as a means in particular to move closer to EU accession, is through the medium of environmental protection and regulation. Though there are currently separate and distinct administrative systems at the Entity levels it is important to note that trans-Entity environmental co-operation may be a positive means of ‘building bridges’ in the symbolic and literal sense.

To date some steps have been taken by Bosnia-Herzegovina in the air, water and waste sectors to advance environmental protection objectives. Implementation capacity, however, is currently limited, owing to scarce human and technical resources. Nevertheless, such lack of capacity may prove to be a catalyst for inter-State cooperation as it is in this context that the establishment of a well equipped State-level Environmental Agency was identified as a priority objective by the Commission in the 2003 Feasibility Study.²⁵

The 2003 Feasibility Study provides a basis for the agreement of the SAA. It required, *inter alia*, that BiH strengthen co-operation with the EU in combating environmental degradation with particular regard to: air and water quality; pollution monitoring; promotion of energy efficiency and safety at industrial plants; classification and safe handling of chemicals; urban planning; waste management; and, protection of forests, flora and fauna.

Further findings of the Feasibility Study categorise the state of the environment in BiH as poor. Noting the physical and developmental impacts of civil war this is not surprising. This 2003 finding was underpinned by the caveat, however, that “with the exception of specific conflict-related problems (such as unexploded

has set political and economic criteria for membership, as well as the Copenhagen criteria related to the obligations of membership and the administrative capacity to implement and enforce the EU’s laws and policies (as stated in the conclusions to the European Councils at Copenhagen in 1993 and Madrid in 1995). The three basic principles of the Commission’s approach to enlargement are consolidation, conditionality and communication. *See further* Communication from the Commission 2005 enlargement strategy paper, Brussels, 9.11.2005 COM (2005) 561 final.

²³ *Report from the Commission to the Council on the preparedness of Bosnia and Herzegovina to negotiate a Stabilisation and Association Agreement with the European Union*, Brussels, 18.11.2003 COM(2003) 692 final.

²⁴ *See* Council Decision 2006/55/EC of 30 January 2006 on the principles, priorities and conditions contained in the European Partnership with Bosnia and Herzegovina and repealing Decision 2004/515/EC.

²⁵ *Supra* note 20.

ordinance) [the situation is] probably no worse than in some central European candidate countries at a similar stage of their development.”²⁶

It was observed by the Feasibility Study that there are yet no mechanisms in place to ensure that environmental protection within BiH is integrated into the formulation of other policies. Consequently, objectives that require both Entities to work together in cooperation to combat environmental degradation and to achieve sustainable development should be sought. A co-operative approach to implementation of the E-PRTR can assist with this.

A combined, harmonised approach to developing the E-PRTR in both of the Entities makes particular sense when it is observed that environmental pollution is a transboundary issue affecting the State of Bosnia-Herzegovina in its entirety and not just the respective Entities in the place where pollution is released. Currently, both Entities are following the best practice of the same jurisdiction for environmental law-making purposes, that of the European Union. Such uniform steps are needed in order to advance a level-playing field in both Entities in environmental protection. This is significant both for the environmental standards that are to be set and in terms of advancing environmental democracy. Hence, simultaneous implementation of a pollution register in both Entities in the same manner makes sense.

The Commission observed that “whilst there is some monitoring of environmental data, it is unclear how such data are used.” Hence, one benefit of a pollutant release and transfer register would be the contribution that it can make to enhancing public awareness of environmental issues through facilitating access to environmental information. This in turn can lead to improved public participation in environmental decision-making and enhanced environmental protection; objectives firmly entrenched in Article 1 of the E-PRTR Regulation.²⁷

Further noting lack of capacity at the institutional level for the positive advancement of an environmental protection agenda, institutional strengthening has to be considered a priority. To this end, international assistance has been provided, largely through the EU, and will continue to be provided to help develop a framework of environmental law and implementation, enforcement and monitoring capacity. Though an Inter-Entity Environment Coordinating Committee was set up in 1998, the Commission Feasibility Study observed that co-ordination between the players remains sub-optimal. It is thus hoped the State-level Environment Agency would enhance such a role.

²⁶ *Feasibility Study on the preparedness of Bosnia and Herzegovina to negotiate a Stabilisation and Association Agreement with the European Union* (COM (2003) 692 final), at 37, second paragraph of section 3.7.9.

²⁷ Article 1 Subject Matter

This Regulation establishes an integrated pollutant release and transfer register at Community level (hereinafter “the European PRTR”) in the form of a publicly accessible electronic database and lays down rules for its functioning, in order to implement the UNECE Protocol on Pollutant Release and Transfer Registers (hereinafter “the Protocol”) and facilitate public participation in environmental decision making, as well as contributing to the prevention and reduction of pollution of the environment.

One single State-level PRTR database is preferable to two Entity level databases as a means to implement the E-PRTR, for further reasons. It will make it easier for the public and other stakeholders to access environmental information and it will provide consistency in terms of interpreting and understanding data. If there were to be two separate Entity-level databases it would be preferable to create and utilise them in exactly the same manner. One objective of creating a pollution register database is to make it as accessible to the public as possible to maximise public participation.²⁸ A publicly accessible data register would also contribute to advancing accountability and civil society while also assisting in educating the public on environmental issues. One database would bring additional benefits such as potentially being more cost-effective and would avoid duplication of staff and other related administrative costs. The fact that there are two administrative regimes should actually enhance the development of one PRTR and the related monitoring and enforcement: with *two* competent authorities responsible for organising data collection, ensuring monitoring and enforcement within their own Entities, they are likely to obtain more data and from a broader spectrum of sources, regions and areas within their own jurisdictions.

B. Main Objectives of an Emissions Register: EPER/E-PRTR

BiH is a signatory state to the Kiev Protocol. On account of the breadth of existing EU legislation on water and persistent organic pollutants, the E-PRTR covers more substances than the Kiev Protocol. The deadlines for reporting information set in the E-PRTR are also shorter than those laid down in the Protocol. This is likely on account of the fact that current Member States have the necessary experience and capacity for more regular reporting and the desire to maintain tighter pollutant release and transfer standards and reporting standards. The model proposed in this paper for a Rulebook on Installations and Pollution Register is based on the founding EU approach under the EPER and the new obligations advanced under the E-PRTR as best practice.

By way of comparison, EPER and the new E-PRTR aim(ed) to facilitate the following and advance the stated benefits:

- *collection* of comparable emission data from around 20,000 individual polluting industrial sources and activities as specified in the IPPC Directive;²⁹
- *storage* of the reported data in a database or register, which is publicly accessible
- *dissemination* of the registered data to the public by written reports and the Internet (or other electronic media). An improved pollution register through the E-PRTR will improve the public's access to environmental data and

²⁸ *Id.*

²⁹ Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control, as amended, OJ 1996 L 257.

information. The Register will also facilitate access to justice requests in accordance with the Aarhus Convention and Directive 2003/4/EC³⁰ as stated in Article 13 of the Regulation.

- implementation in an improved manner of environmental legislation as competent authorities will be able to identify trends in data that can be used to improve environmental policy.

I. Links to IPPC/Integrated Permitting

As the Entities of BiH are following the best practice of the EU for environmental law purposes, environmental permitting laws so far drafted³¹ are based on the EU Integrated Pollution Prevention and Control Directive.³² The origins of the EPER Decision are based on Article 15(3) of the IPPC Directive (96/61/EC) on public access to information on environmental releases, further strengthened by Directive 2003/35/EC on public participation and access to justice as amending the IPPC Directive (though this latter Directive does not explicitly refer to EPER – it is indirectly related as it is arguable that full participation and access to justice also depends on access to emissions data). Thus it makes sense to follow the EU model for the purposes of developing a PRTR.

The link to IPPC is central to the requirement to create such an emissions register. Successful functioning of an emissions register relates to integrated environmental permitting as the emissions thresholds that should not be exceeded can be stipulated in the permit that allows an installation to operate. Emissions monitoring should take place and if the emissions thresholds are exceeded, this should be reported. Monitoring and self-reporting can take place by the facility operators, the competent authorities or both.

Of note here is the need to ensure effective transposition of the IPPC Directive in order to achieve full implementation of the E-PRTR Regulation. There are two ‘categories’ of activity that are listed in Annex I to the IPPC Directive but (and this may be a translation error) these do not appear to be included in the Federation “Rulebook on plants and installations for which environmental impact assessment is obligatory and on plants and installations that may be constructed and commissioned only provided they hold environmental permit” (*sic.*). The equivalent Republika Srpska Rulebook should also be checked for IPPC Directive consistency. Even if the Entities do not currently regulate such installations they

³⁰ Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC. OJ 2003 L 41/26.

³¹ Rulebook on the plants and installations for which the environmental impact assessment is obligatory and the plants and installations which may be constructed and put into operation only if entitled to the environmental permit (Official Gazette, No. 19/04 F B&H and RS No. 7/06). Rulebook on deadlines and conditions for applying for environmental permit for plants and installations that had their environmental permit issued prior to the entry into force of the law on environmental protection (Official Gazette, No. No. 68/05 of Fed B&H and Rep Srpska No. 24/06). (*Sic.* Unofficial translation).

³² *Supra* note 29.

may need to be regulated in the future and thus the ‘permitting’ Rulebooks should be fully aligned with the IPPC Directive as these activities require that information be reported to the Register.

The EU IPPC Directive (and the respective implementing legislation on Environmental Permitting in the Entities), requires installations to obtain permission to emit specified amounts of effluent. Obtaining such permission requires that the conditions of a permit be met and that the permitted amounts of emissions are not to be exceeded. The original EPER database used by the European Community required that any permitted emission limits that exceeded set thresholds (which were written into the EPER legal Decision) for those activities covered by the IPPC Directive had to be reported regularly to the national competent environmental authority for clearly identified periods of time. This data was then made available to the public through an Internet database at national level and was submitted to a central EU database, managed by the European Environment Agency.

II. Links to Other Databases

Other EU and international laws also require that emissions data be reported: for example, the UNFCCC Kyoto Protocol,³³ the EU Emissions Trading Directive³⁴ and the EU Water Framework Directive.³⁵

The implementation of a broader-ranging PRTR will be useful in helping the Entities to streamline data collation and reporting requirements that exist under a variety of legislative instruments; international, EU and national. It is important to determine, however, what other provisions regarding data reporting, emissions reporting, environmental information systems and information collection exist in the primary and secondary environmental laws of the Entities to minimise double counting and duplication of effort and resources.³⁶

Cross referencing other articles and legal provisions on data management and reporting requirements within the pollution register implementing legislation is relevant as the data or information that is collected for one particular purpose prescribed in a specific article may be useful for other prescribed data collection purposes,³⁷ to the extent that the *nomoteknik*³⁸ allows this.

³³ 1997 Kyoto Protocol to the 1992 United Nations Framework Convention on Climate Change.

³⁴ Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, OJ 2003 L 275/32, establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

³⁵ Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy, OJ 2000 OJ L 327.

³⁶ Article 3(5) of the Kiev Protocol explicitly states that “to reduce duplicative reporting, pollutant release and transfer register systems may be integrated to the degree practicable with existing information sources such as reporting mechanisms under licences or operating permits.”

³⁷ Article 3(5) of the Kiev Protocol explicitly states that “to reduce duplicative reporting, pollutant release and transfer register systems may be integrated to the degree practicable with existing information sources such as reporting mechanisms under licences or operating permits.”

³⁸ The *nomoteknik* (nomotechnique) is the knowledge and application of the rules of legal techniques, often pertaining to the method and style of legal drafting that is applied in a particular

One of the key factors behind EPER/E-PRTR is to have inter-comparability and compatibility with data from other registers and sources of data on emissions and jurisdictions. This is an added reason why the Entities should aim to adopt a harmonised or joint approach to implementing the E-PRTR. Note that though Bolshakova and Toth Nagy observe that: “existing systems of emissions registers in the [Central and Eastern Europe] region have been developed and designed to assist governmental agencies in fulfilling their tasks related to environmental protection” they caution that

“[i]n practically all the countries, many of the institutions have developed not only their own systems of registers but also their own methodologies of analysis and processing the data. This has led to multiple non-compatible and non-consistent registers and inventories run by multiple institutions and departments. The information produced ... provides neither a clear picture regarding the levels of pollution, nor contributes to tracking trends or setting targets ... One of the most serious deficiencies of the existing systems, however, is that they have been designed solely for the purpose of assisting particular agencies. The information produced as a result of running such registers is too sporadic and incompatible for efficient use by the general public. The lack of a single integrated system allowing access to information ... creates a serious obstacle not only for public access to information, but also for the effective use of such information by the public.³⁹

C. Legal Basis for a Rulebook on Installations and Pollution Register in Each of the Entities

BiH signed⁴⁰ the United Nations Economic Commission for Europe (UN-ECE) Kiev Protocol to the Aarhus Convention on Pollutant Release and Transfer Registers on 21 May 2003.

In addition, BiH is a collaborating non-member country of the European Environment Agency (EEA) European Environment Information and Observation Network (EIONET) where data submission and other information is provided that is used for making decisions for improving the state of the environment in Europe and making EU policies more effective. The information submitted to EIONET from BiH to date appears to be minimal and the development of a PRTR would enhance EIONET contributions.

Within the Federation of Bosnia Herzegovina the Competent Ministry for environmental protection is required by Article 28 of the Federation Framework Law on Environmental Protection (Official Gazette of Fed-BiH, No. 33/03) to maintain an Installation and Pollution Register.

legal system. This term is regularly used in former Yugoslavia and law students are often taught the *nomoteknik* in law school.

³⁹ M. Bolshakova & M. Toth Nagy (Eds.), *Developing and Implementing Integrated National Pollutant Release and Transfer Registers in the Accession Countries of Central and Eastern Europe 5* (2003), the Regional Environmental Center for Central and Eastern Europe.

⁴⁰ Not yet ratified.

Within Republika Srpska the Competent Ministry for environmental protection is required by Article 28 of the Republika Srpska Framework Law on Environmental Protection (Official Gazette of RS 50, 51, 53/2002) to maintain an Installation and Pollution Register.

The wording⁴¹ of the Article 28 legal bases is the same for each Entity. However, for illustrative purposes the Fed-BiH Law on Environmental Protection provides the following:

Installation and Pollution Register

The competent Ministry shall keep an installation and pollution register.

The register shall contain data on activities, plants and installations that endanger or may endanger the environment, and particularly the following data:

- the name and address of the operator and the location site of the plant and installation;
- a brief description of the activity and technical process;
- relevant data regarding emissions, dangerous substances present in the plant and installation, waste production, and resources and energy use;
- data regarding permitting, changes, etc. and;
- data on control, relevant results and measures taken.

The Cantonal Ministry shall prepare an annual report on permits issued for plants and installations, and, together with data referred to in paragraph 2 of the present Article, it shall submit it to the Federal Ministry.

The competent environmental institutions shall submit the data in their possession to the competent Ministry.

The Federal Minister shall prescribe the manner for submitting data.

The Installation and Pollution Register shall be available to the public.

Any person may require to inspect the Register and to be issued with a copy of data from the Register. (*Unofficial translation*).

Hence, the requirement for the competent environment Ministry to keep an installation and pollution register provides sound legal basis for implementation of the Kiev Protocol and EU E-PRTR.

The respective environmental protection framework laws in the BiH Entities have been analysed and the following data and reporting requirements are identified:

*Related reporting provisions in Federation BiH Framework Law on Environmental Protection:*⁴²

- Article 10 – Public Participation and Access to Information; Articles 22 & 23 – Environmental Information System and Information Collection; Article 24 – Environmental Data Entry into other Registers; Article 28 – Installation and Pollution Register; Article 29 – Active Provision of Environmental Protection Information; Articles 30 & 31 – Public Participation and Access to Environmental Information; Articles 33 & 34 – Access to Environmental Information; Article 36 – Public Participation in Decisions on Specific Activities; Article 37 – Information

⁴¹ Unofficial translation.

⁴² Official Gazette of FBiH, No. 33/03.

Available Upon Request; Article 73 – Data submitted by (Installation) Operator; Article 107 – Right to Information; Article 113 – Coordination of (Inter-Entity) monitoring and information systems and information collection and exchange.

*Related reporting provisions in Republika Srpska Law on Environmental Protection.*⁴³

Articles 22 & 23 – Environmental Information System and Information Collection; Article 24 – Environmental Data Entry into other Registers; Article 28 – Installation and Polluter Register; Article 29 – Active Provision of Environmental Protection Information; Article 30 – Public Participation and Access to Environmental Information; Article 32 – Environmental Information Access; Article 35(2) – Public Participation in Decisions on Special Activities; Article 36 – Information Available Upon Request; Article 75 – Data submitted by Responsible Person; Article 80 – Obligations of Ministry Competent for Environmental Protection (to keep records and make amendments to the installation registry); Article 84 – Prescription of Installation Requirements and Environmental Quality Standards - Regulations/ Secondary Legislation on emission report submissions etc.; Article 106 – Right to information (in case of liability); Article 112 – Coordination of (Inter-Entity) monitoring and information systems and information collection and exchange.

Noting the above, it is recommended to the Entities of BiH that the EU model for the development of a Rulebook on Installations and Pollution Register be followed in the development of national law and policy in this area, building upon EPER and the new E-PRTR.

D. EU European Pollutant Emission Register (EPER)

The 2000 EPER Decision required that Member States transfer their national monitoring data to a central database/register in line with the requirements of said Decision so that data reporting on industrial emissions was streamlined throughout the EU.

EPER was designed to provide the European Commission with EU-wide emissions data from Member States' industrial installations that could be uploaded onto a central, publicly accessible database operated by the European Environment Agency. EPER required each EU Member State to regularly collect and submit specified emissions data in a prescribed manner and format. Many Member States also provided publicly accessible emissions data on their own national competent authority websites. The emphasis was, and remains with E-PRTR, on providing *publicly* accessible emissions data.

The EPER contained precise formatting requirements for data reporting in Annex II of the Decision. In particular, NACE-codes (National Classification of Economic Activities) and NOSE-P codes (the latter based on Annex III requirements) were to be used. The NACE-codes are 4 digit codes that indicate the main economic activity of the installation site. For the EU, the NACE nomenclature is used.⁴⁴ It is based on economic sectors and is composed of four

⁴³ Official Gazette of RS 50, 51, 53/2002.

⁴⁴ Commission Regulation No. 29/2002 of 19 December 2001 amending Council Regulation (EEC)

digits (there is a fifth digit for national use). The first two digits of the code identify the division, the third digit indicates the group and the fourth digit indicates the class. The Entity competent authorities may have a similar form of economic classification for identifying industrial facilities that are in operation or may already apply these codes. The new E-PRTR retains the use of the NACE-codes. The NOSE-P codes are 5 digit codes used to identify the installation ('facility') source of the emission.

Under EPER, it was an additional requirement that when reporting on emissions, the methods of measurement used to obtain the evaluation should be indicated using M = Measured (the Analytical Method used should be indicated); C = Calculated (the Calculation Method used should be indicated); and E= Estimated.

Repeal of the EPER Decision by the Commission, after discussing how to proceed with its Secretariat General, was scheduled to take place in late 2006/early 2007.⁴⁵ Repeal was only possible after all Member States had completed the second EPER reporting round at the end of June 2006, (the results were published on the EPER website November 2006).⁴⁶ A Communication from the Commission that the EPER Decision is obsolete ("declaration of obsolescence") was expected to be adopted mid-May 2007 by the Commission.⁴⁷

E. The European Pollutant Release and Transfer Register (E-PRTR)

The European Commission proposed a Regulation for the E-PRTR on 7 October 2004.⁴⁸ The rationale for applying a Regulation as the implementing basis was so that all Member States would be required to provide and obtain data in a *uniform manner*, an important objective of a centralised database reporting system. As E-PRTR builds upon the foundations of the EPER, current *Member States*, or at least the original 10, should be in a position to move directly from EPER implementation to E-PRTR implementation. Previous implementation of the EPER Decision has meant that the most challenging aspects of conformity, such as the creation of the database and the Internet sites (or other electronic media),

No. 3037/90 on the statistical classification of economic activities in the European Community, OJ 2002 L 6. According to the 7 April 2006 Draft Guidance Document for the Implementation of the European (European Commission/BIPRO - Beratungsgesellschaft für integrierte Problemlösungen) PRTR revision of the NACE codes is currently being discussed and is likely to come into effect in 2008.

⁴⁵ According to an official communication with the Commission, 2006.

⁴⁶ The report on the analyses of the second reporting period is expected to be published end of April 2007.

⁴⁷ Personal communication with DG Environment, 15.05.2007. Declaration of obsolescence should be announced in the C-series of the Official Journal.

⁴⁸ Proposal for a Regulation of the European Parliament and of the Council concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC, COM (2004) 634 final 2004/0231 (COD).

the systems for data collection and management and so on are already in place. There is no need for Member States to transpose the E-PRTR Regulation on account of it being directly effective.

However, the approach in BiH will have to take into consideration the fact they have not been previously required to implement EPER and that suitable pollutant databases may not already exist. As a consequence, ‘implementation’ will have to begin at a ‘pre-EPER’ stage. Note that as BiH is not currently an EU Member State or a fully ratified Member of the Kiev Protocol, the steps outlined in this paper are not legally enforceable requirements.

Just like EPER, the European PRTR will provide information about releases of pollutants from specific industrial facilities and activities, and by country, though it will cover 9 additional industrial activities that are not covered in EPER/IPPC Directive Annex I but which the Kiev Protocol covers. These are now included in the Annex I List of Activities of the E-PRTR Regulation and are:

- 1(e) Coal rolling mills with a capacity of 1 tonne per hour;
- 1(f) Installations for the manufacture of coal products and solid smokeless fuel;
- 3(a) Underground mining and related operations;
- 3(b) Opencast mining and quarrying where the surface of the area effectively under extractive operation equals 25 hectares;
- 5(f) Urban waste-water treatment plants with a capacity of 100,000 population equivalents;
- 5(g) Independently operated industrial waste-water treatment plants which serve one or more activities of Annex I of the E-PRTR Regulation with a capacity of 10,000 m³ per day;
- 6(b) Industrial plants for the production of other primary wood products (such as chipboard, fibreboard and plywood) with a production capacity of 20 tonnes per day;
- 6(c) Industrial plants for the preservation of wood and wood products with chemicals with a production capacity of 50 m³ per day;
- 7(b) Intensive aquaculture with a production capacity of 1,000 tonnes of fish or shellfish per year;
- 9(e) Installations for the building of, and painting or removal of paint from ships with a capacity for ships 100 m long.

I. From EPER to E-PRTR

By way of short summary of the ‘old’ EPER and ‘new’ E-PRTR:

	EPER	E-PRTR
Approach to emissions reporting	Narrow	Wide
Activities	56 activities	65 activities

Substances	50	91
Media	Air, water	All media
Reporting cycle	Every 3 years	Annual

The E-PRTR Regulation amends Directive 96/61/EC on IPPC as Article 15(3)⁴⁹ is deleted and Directive 91/689/EEC hazardous waste as Article 8(3)⁵⁰ is deleted.

The reporting cycle under E-PRTR will be annual instead of every three years (as under EPER) as per Article 5 of the Regulation.⁵¹ In addition, the E-PRTR also requires compilation of reports of pollution from *diffuse sources* such as road traffic, aviation, shipping and agriculture. After the initial establishment of the E-PRTR, citizens will have a say in how it should be developed further, in accordance with Article 12.⁵² This latter element further strengthens public participation in environmental decision-making.

Though E-PRTR largely builds upon EPER, there are not only new requirements under E-PRTR but there are also some changes to the format reporting requirements. As with EPER, the methods of measurement used to

⁴⁹ The following text shall be deleted:

An inventory of the principal emissions and sources responsible shall be published every three years by the Commission on the basis of the data supplied by the Member States. The Commission shall establish the format and particulars needed for the transmission of information in accordance with the procedure laid down in Article 19. In accordance with the same procedure, the Commission may propose measures to ensure inter-comparability and complementarity between data concerning the inventory of emissions referred to in the first subparagraph and data from other registers and sources of data on emissions.

⁵⁰ The following text shall be deleted:

In addition, by 12 December 1994, the Member States shall send the Commission the following information for every establishment or undertaking which carries out disposal and/or recovery of hazardous waste principally on behalf of third parties and which is likely to form part of the integrated network referred to in Article of Directive 75/442/EEC:

- name and address,
- the method used to treat waste,
- the types and quantities of waste which can be treated.

Once a year, Member States shall inform the Commission of any changes in this information. The Commission shall make this information available on request to the competent authorities in the Member States. The format in which this information will be supplied to the Commission shall be agreed upon in accordance with the procedure laid down in Article 18 of Directive 75/442/EEC.

⁵¹ Article 5, Reporting by Operators, paragraph (1): The operator of each facility that undertakes one or more of the activities specified in Annex I above the applicable capacity thresholds specified therein shall report the amounts annually to its competent authority [...].

⁵² Article 12, Public Participation 1. The Commission shall provide the public with early and effective opportunities to participate in the further development of the European PRTR, including capacity-building and the preparation of amendments to this Regulation. 2. The public shall have the opportunity to submit any relevant comments, information, analyses or opinions within a reasonable timeframe. 3. The Commission shall take due account of such input and shall inform the public about the outcome of the public participation.

obtain the evaluation should be indicated using the 'M', 'C' or 'E' code system for the reporting of Annex II pollutant releases. However, under E-PRTR the EPER NOSE-P-codes will no longer be used, though the NACE codes will. Annex II of the E-PRTR Regulation lists those pollutants and their CAS (Chemicals Abstract Service)⁵³ numbers that are to be reported by operators carrying out Annex I activities above the specified capacity thresholds in accordance with Article 5 operator reporting requirements.

The coding of the activities that are undertaken at the facilities will be reported according to the format indicated in Annex III of the E-PRTR Regulation. In addition to this coding, the IPPC codes (where such a code pre-exists due to Annex I of the IPPC Directive, recalling that the E-PRTR covers a wider range of activities) will also be attributed to the activities.

By way of illustration, the 'reference code' for plants for the pre-treatment or dyeing of fibres or textiles under Annex I of the E-PRTR Regulation is category 9(a) which is listed as category 6.2 under the IPPC Directive Annex I and the NACE code for that type of installation should be used.

Annex III of the E-PRTR Regulation also goes further than EPER in that data reports on transfers of wastes and waste-waters should indicate 'D' or 'R' for disposal or recovery as well as the 'M', 'C' or 'E' code, and report on whether off site transfers were within the country or to other countries, an obligation that will assist in monitoring compliance under the Basel Convention⁵⁴ and in implementing the Shipment of Waste Regulation.⁵⁵

Article 14(1) required that the Commission produce a guidance document supporting the implementation of the E-PRTR no later than September 2006, 4 months before 1 January 2007 commencement of the first reporting year. In accordance with Article 14(2) the guidance document for implementation of the E-PRTR, published on 31 May 2006,⁵⁶ addresses in particular, details on reporting procedures; the data to be reported; quality assurance and assessment of the data; the indication of type of withheld data and reasons why they were withheld in the case of confidential data; reference to internationally approved release determination and analytical methods, sampling methodologies; and the coding of activities according to Annex I to this Regulation and the IPPC Directive. Such Guidance assists in advancing quality control and harmonisation in data reporting throughout the Member States and will also assist BiH in legal drafting and implementation.

⁵³ CAS numbers or CAS registry numbers are unique numerical identifiers for chemical compounds, polymers, biological sequences, mixtures and alloys. The CAS numbers are assigned by the Chemical Abstracts Service (CAS) which is a division of the American Chemical Society. As of June 8 2007, there were 31,739,354 organic and inorganic substances in the CAS registry – the current number can be ascertained via the 'substance counter', see <http://www.cas.org/cgi-bin/regreport.pl>.

⁵⁴ 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, as amended.

⁵⁵ Council Regulation (EEC) No 259/93 on the Supervision and Control of Shipments of Waste within, into and out of the European Community of 1 February 1993, as amended.

⁵⁶ http://www.eper.cec.eu.int/eper/documents/E-PRTR_GD-02062006_FIN.pdf#search='europa%20eprtr'. Last accessed on 21 May 2007.

F. Preliminary Issues to Be Addressed Prior to Legal Drafting in BiH

For the purpose of this paper it is assumed that the logical competent authority for the legal drafting and implementation of a Rulebook on Installations and Pollution Register within each of the Entities is the Ministry with competency for environmental issues, though this will have to be finally determined. In the Federation this is (at the time of writing) the Ministry for Physical Planning and Environment (MPPE) and within the Republic this is the Ministry of Urbanism, Civil Engineering and Ecology (MUCEE).

The necessary infrastructure and capacity building needs also have to be considered. Even if there is a Rulebook which provides legal justification for a pollutant release and transfer register, practical considerations such as staff, technical experts and so on will be required to ensure full implementation and the practical day-to-day functioning, e.g. access to computers; availability of trained staff; and provision of monitoring equipment, will all impact on the success of such a PRTR. The extent of the above will influence the degree to which certain criteria can be mandated within the Rulebook and will also impact on compliance with the Rulebook. The roles of other agencies should also be considered, particularly in relation to monitoring and enforcement, and the obligations of said competent authorities, either based on existing roles or new responsibilities, should be determined as part of an implementation strategy.

Further, cognisance should be had of the potential for an implementing Rulebook to be subject to amendment due to related scientific and technological progress in light of changes to Annexes II or III of the E-PRTR Regulation.

I. Questions to Be Answered with Regard to the Above Preliminary Issues

Noting that BiH is not yet an EU Member State and has not implemented EPER, the approach to implementation can at the current time, if necessary, be made simpler and less demanding in financial, administrative and other terms. However, as the Regulation would have to ultimately be fully effective as a means of EU accession it would be prudent to achieve EU standards as early as possible. Some preliminary questions should be answered by and for the benefit of those tasked with legal drafting and implementation before a regulation on PRTR is developed and the creation of the PRTR commences. This way, the needs and expectations of the Entities can be best anticipated and addressed. Examples are as follows;

1. Are there any 'reporting' registers or databases currently in existence for the environmental sector in the Federation of BiH or Republika Srpska or that the Entities or BiH State report to?
2. Do the Entities wish to follow the EPER model or the E-PRTR model of register, or both? The EPER model is more limited in the amount and type of data that is required. The E-PRTR requires annual reporting on emissions to

all media. Further, EPER requires data from fewer types of installation than the E-PRTR, and covers fewer pollutants than the E-PRTR. However, it is suggested that the E-PRTR sets the best standard and this is required for EU accession.

3. Should such Rulebook be based on the EPER model Annex I & Annex III/ E-PRTR installations categories as per Annexes I & II? Noting that the Entities of BiH are not yet EU Member States, they can determine their own categories though it is advisable to adopt an approach that is used by a number of European countries.
4. As the Entities of BiH are not yet EU Member States, how detailed should such a Rulebook on Installation and Pollution Register be and on what basis will this be decided?
5. Will the public be involved in the creation of the Register? As noted above, once the E-PRTR is operating, the public will be invited to be involved in developing it even further as per Article 12(1).⁵⁷ This is a sensible approach as citizens often know what installations etc. are operating in their neighbourhoods and can comment on the impacts of these on their lives and local environment.
6. Do the Entities currently apply a system of NACE (National Classification of Economic Activities) based on the European classification of economic activities system of codes or do they apply some other system or none?
7. Which bodies currently have responsibility for data collection and monitoring of environmental emissions/releases/transfers?

G. Legal Implementation Steps

The EPER Decision and the E-PRTR are based on several key ‘stages’ and a new Rulebook on Installations and Pollution Register requires that the respective Entity competent authorities consider these. Noting that the EU is replacing EPER with the E-PRTR, it is recommended that the legal implementation steps be initially based on the EPER Decision which is the fundamental foundation to such registers. The new elements introduced by the E-PRTR can then be considered.

Verify the number and nature of E-PRTR Regulation Annex I installations

The Ministries of the Federation and the Republic should ideally verify the number and nature of E-PRTR Regulation Annex I installations within their respective jurisdictions. The successful implementation of such a register relies on accurate emissions data from installations that emit certain pollutants at certain levels and will thus be required to report such emissions to the register. If it is not accurately

⁵⁷ Art. 12, public participation, paragraph (1) “The Commission shall provide the public with early and effective opportunities to participate in the further development of the European PRTR, including capacity-building and the preparation of amendments to this Regulation.”

known what installations are operating in the Entities, some may well evade the legal requirement to monitor and report emissions data, not to mention the fact that they may be operating without an integrated environmental permit.

Identify and select industrial facilities that currently operate Annex I activities

Entity competent authorities should endeavour to identify and select the industrial facilities that operate the activities listed in Annex I of the E-PRTR (or identify and select the Entity facilities that operate activities that are listed in Annex I of IPPC Directive (as per Art. 1(1) of EPER – though this approach is narrower in scope as the nine additional E-PRTR activities are not included)) so that they will come under the remit of the Rulebook.

Identify and select installation facility types that are likely to operate Annex I activities in the future

The competent Authorities should also identify and select installation facility types that are likely to operate Annex I activities in the *future* and include them within the scope of the Rulebook particularly so that any implementing legislation does not have to be amended in the future if new industrial sectors begin operation.

Identify pollutants and their emissions thresholds

Pollutant-specific emissions (diffuse and channelled releases) from all individual facilities from Annex I activities for *releases to air, water & land* that are to be reported on by the facility operator, and specified threshold values based on Annex II (E-PRTR) for which an exceedance will require reporting, should be determined. In short, this requires the competent authorities to identify what the pollutants are and what the pollutant emissions thresholds are as per Annex II of E-PRTR (or the outgoing EPER Annex III of IPPC Directive).

Inform installation operators of their legal obligations in advance

The majority of reporting under the E-PRTR Regulation is to be carried out by ‘operators’ in accordance with Article 5. ‘Operator’ is defined in Article 2(6) as “any natural or legal person who operates or controls the facility or, where this is provided for in national legislation, to whom decisive economic power over the technical functioning of the facility has been delegated.” To this end, the competent authorities should consider informing installation operators in advance of their obligations in relation to any legally mandated reporting requirements. They should also consider the procedure for informing ‘facilities’ of their reporting obligations under the new law. It may also be prudent for the Entity competent authorities to undertake some awareness-raising exercises (as mandated under Article 15 of the E-PRTR Regulation) and training workshops in advance of the entry into force of a Rulebook on Installations and Pollution Register. Funding for such capacity building, not only for installation operators but also for competent authority staff, may be available from external donors such as the EU.

Determine/identify procedures for collecting data, measuring emissions etc., & advise operators on how to do this

For Article 5 operator reporting obligations, the competent authorities should be in a position to advise operators on whether, and how, to undertake measurements (M), calculations (C) or estimations (E) and how to complete the Annex III format reporting requirements in this regard. They should also inform operators that they are required to report on releases and transfers resulting as totals of all deliberate, accidental, routine and non-routine activities (Article 5(2)). To this end, competent authorities should be in a position to assist in helping operators determine when such releases have occurred.

Require reporting of releases which exceed thresholds

For the identified Annex I activities, the operators are required to report releases to air, water and land of any pollutant specified in Annex II for which the applicable threshold value specified in Annex II is exceeded (Article 5(1)(a)).

Mandate the reporting of waste transfers

Operators are required under Article 5(1)(b) of the Regulation to report off-site transfers of hazardous waste exceeding 2 tonnes per year or of non-hazardous waste exceeding 2,000 tonnes per year, for any operations of recovery (“R”) or disposal (“D”), and for transboundary movements of hazardous waste. The competent authorities specifically need to ensure that operators, when completing their data reporting, indicate “R” or “D” as per Annex III (Format for Reporting Release and Transfer Data by Member States to the Commission) of the Regulation.

For the above, it is also necessary to require that the name and address of the recoverer or the disposer of the waste and the actual recovery or disposal site are reported by the facility operator.

Article 5(1)(c) requires operators to report on pollutants in waste water from all individual facilities from Annex I activities that are destined for off-site waste water treatment, *i.e.*, *waste transfer*. Operators are to specify the threshold value based on Annex II (E-PRTR) release thresholds for which an exceedance requires reporting. Again, Entity competent authorities should be prepared to provide assistance to operators in this regard.

As regards releases to land under the E-PRTR, waste generated on the site of the facility, which is disposed of by ‘land treatment’ or ‘deep injection’ as per Annex II of Waste Framework Directive,⁵⁸ the *operator of the facility where the waste originated* shall be responsible for the reporting (Article 6). One practical consideration for the competent authorities is to ensure that such reporting actually takes place and there are not incidences of waste being transferred offsite without such transfer being registered or without the waste ‘originator’ being held accountable.

⁵⁸ Directive 75/442/EEC, OJ 1975 L 194, as amended by Directive 91/156/EEC, OJ 1991 L 78.

Use installation identification codes and numbers

The E-PRTR Regulation requires that each Annex I activity be allocated a corresponding code from Annex I of the E-PRTR Regulation and the IPPC code from the IPPC Directive (if such a code pre-exists in Annex I of the IPPC Directive) in order to identify the industrial activity. The Commission E-PRTR implementation guidance clarifies the use of these codes. These codes replace the EPER NOSE-P codes. The codes are to be entered into the database rather than the full description of the installation so as to identify the ‘facility’ source of the emission. This requirement is certainly something that the Entity competent authorities shall have to prepare for and assist operators with. Awareness raising leaflets and explanatory information would be useful in this regard.

The need for awareness-raising by the Entity competent authorities can also be argued in relation to the NACE codes. NACE codes are to be allocated for each facility,⁵⁹ in order that the economic sector of the facility can be easily identified. The Rulebooks should contain an Annex or a section to which installation operators or persons compiling the data can refer so that they know which NACE code to use to describe their installation. The national websites should contain information that explains the coding system, particularly so that not only facility operators but also members of the public can understand and interpret the data.

It is also necessary to ensure that facilities have designated identification numbers (these numbers may already have been allocated under some other Entity registration or permitting scheme) in accordance with Annex III reporting format requirements. Competent authorities should take steps to ensure that these numbers are allocated in advance of the first reporting year so that reporting can be undertaken by operators and information be placed on the Entity level database(s) in a prepared and timely manner.

Related to this is the need for the Entity competent authorities to set a date by which time operators are required to have submitted the data.

Determine reporting parameters

The competent authorities have discretion for determining whether reporting will be for the total amounts of each pollutant emitted exceeding the threshold or for individual pollutant amounts. It is arguable that the former approach will be more efficient and it is the approach taken under the EPER/E-PRTR. This can be contrasted with the latter approach which may well be more informative but may be inefficient and result in additional reporting and administrative burdens for operators and competent authority staff. Competent authorities shall also determine the frequency with which reporting is to take place, methods, timelines and other parameters.

For diffuse sources it should be determined which competent authority(ies) shall have responsibility for monitoring and reporting on releases to air, water

⁵⁹ As per the Article 5 operator reporting requirements that are to be in accordance with the Annex III format.

and land. It should also be decided how the above competent authorities shall submit the diffuse source data, to whom and by what deadline if they are not uploading data to the register themselves.

Other considerations include determination by competent authorities as to whether installations can report on emissions *below* the set thresholds if they so wish. Competent authorities should determine whether to legislate powers (to themselves or other competent authorities) to allow them to request more specific and detailed information from industry if necessary.

The links to other databases and registers and related reporting obligations such as under other EU Directives should be streamlined.

Finally, the competent authorities should consider producing an annual ‘overview’ report which summarises the submissions to the Register.

Penalties

In accordance with Article 20 of the E-PRTR Regulation, competent authorities should decide whether penalties are required for non-reporting and late submissions and what such penalties will be. Such penalties should be effective, proportionate and dissuasive. The procedure for ensuring that such penalties are administered and enforced needs to be determined.

Prescribe the format for presentation of emissions data

Other pragmatic considerations for the Entity competent authorities in implementing the E-PRTR Regulation concern the prescribed format in which emissions data are to be presented. Decisions have to be taken as to whether this will be based on the format described in Annex A2 of EPER/Annex III of the E-PRTR (they are slightly different) or some other format. Noting that streamlining is the key here, using the E-PRTR Annex III would be logical. Competent authorities need to decide whether the Entities will apply the M, C or E code system for the reporting of emissions. The format in which the diffuse data shall be placed on the public register should be deliberated so that the users of the database can search and identify the releases of pollutants from said different sources. In terms of advising on how pollutant release information from diffuse sources can be estimated it may be practical, say, for the competent authorities to require estimates based on the amount of petrol sales/purchases etc. or the amount of pesticide sales/purchases or adopt some other quantifiable methods of evaluation.

Define and provide examples of best available information

Operators are required to prepare reports by using the best available information (Article 5 (4)). Hence, the Entity competent authorities should define and provide examples for operators of what ‘best available information’ is and might be. This may include monitoring data, emissions factors, mass balance equations, indirect

monitoring or other calculations, engineering judgements and other methods and internationally approved methodologies, whenever these are available, as per Article 5(4) of E-PRTR Regulation.

Determine how data and reporting quality assurance will be evaluated

Entity competent authorities also have obligations in the area of data ‘quality control’. They should determine the procedure for quality control of the reports and data and also determine how quality assurance/control will be evaluated at competent authority level and by whom (perhaps a third party?).⁶⁰ Competent authorities need to determine /identify procedures for collecting data, measuring emissions etc., in a uniform manner as well as identifying the procedure for quality control of the reports and data.

Article 9 of the E-PRTR Regulation provides for quality assurance and assessment. Under Article 9(1) competent authorities are to require that the operators of each facility provide quality assurance for the information that they report. To this end, competent authorities should determine how quality assurance will be evaluated for the data and reports submitted by operators. Perhaps a committee of technical experts or third parties might be required for such evaluation, as is the case with CORINAIR inventories, for example.⁶¹ Such evaluation should ideally include criteria for assessing the quality of the data based on the: timeliness; completeness; uncertainty; comparability; consistency and transparency, as per Article 9 of E-PRTR Regulation. The ‘best practice’ of countries that have been reporting under EPER may well provide some guidance in this regard.

Assist operators in setting up electronic archives

Competent authorities, as per Article 5(5), shall require that the operators keep for a period of 10 years, starting from the end of the reporting year concerned, records of all the data from which the reported information was derived including the methodology used for data reporting. It would be prudent of the competent authorities to assist operators in setting up electronic archives. Competent authorities should also set a date by which time the operators’ data will be incorporated into the Rulebook on Installations and Pollution Register. In addition, competent authorities should consider designating a help-point so that operators can request advice on completing the reporting process.

Determine method for report submission

The Entity competent authorities should also determine the method by which operators will be required to submit their reports. For example, will operators be

⁶⁰ Such third parties should be trained and certified. This is an area which will require legislating separately.

⁶¹ CORINAIR – CORE INventory AIR, a database for reporting ambient air emissions under the UNECE Convention on Long-Range Transboundary Air Pollution and the EU directive on national emission ceilings.

required to upload them directly to a publicly accessible Internet site? Will they submit them on CD? Will they submit them by email? Will paper copies which competent authority staff will be required to enter into an electronic database be acceptable, and so on. These administrative arrangements should consider the access that operators and staff may have to computers, the Internet and the necessary computer literacy skills and experience that might be required. The competent authorities should determine the frequency with which reporting is to take place.

Address issues of confidentiality

Article 11 of the E-PRTR Regulation deals with confidentiality.⁶² This Article provides that whenever information is kept confidential by Member States in accordance with Article 4 of the Directive on access to environmental information⁶³ (which lists exceptions to full disclosure), the Member State shall provide general information as to the type of information being withheld and the reasons for withholding. The authorities need to be able to answer spontaneous operator queries in relation to what should or should not be disclosed in this regard. The Entity competent authorities should ideally determine the circumstances in which there must be full or partial information reporting or some general data reporting requirements so that all stakeholders and the public are aware of the standards. On this note, the Directive on access to environmental information, applies a limited view to non-disclosure in terms of *emissions* data.⁶⁴ Efforts, as far as possible, should be made to provide emissions data to the register. The caveat of Article 4(2) of the Directive on access to environmental information does not allow Member States to withhold public access to information requests where the request relates to emissions into the environment. Hence, in practical legal terms, if an operator wishes to withhold emissions-related information for intellectual property related reasons⁶⁵ the Entity competent authorities (though not yet Member States) should advise that it is acceptable for partial information to be given in order to safeguard trade secrets and that the operator should 'extract' the relevant piece of requested information from any sources that may come under the

⁶² Article 11 Confidentiality:

Whenever information is kept confidential by a Member State in accordance with Article 4 of Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information (1), the Member State shall, in its report under Article 7(2) of this Regulation for the reporting year concerned, indicate separately for each facility claiming confidentiality the type of information that has been withheld and the reason for which it has been withheld.

⁶³ Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC, OJ 2003 L 41/26.

⁶⁴ Article 4.

⁶⁵ As allowed under Article 4(2)(e) of Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC.

scope of the exceptions rule.⁶⁶ The emphasis is on making as much information available as possible. In circumstances where there is a legitimate intellectual property concern, competent authorities could thus require that emissions data be publicly disclosed in general or purely numerical and unit terms. Where data is withheld based on Article 4(2) caveat of the Directive on access to environmental information, the Entity competent authorities shall require that the operator states the reason for it not being published and request that as far as possible s/he provides generic or partial information on the type of data that has been withheld. Data on transfers, which are not 'emissions', are outside the scope of Article 4 exceptions of the Directive on access to environmental information.

Set up databases

Article 10 of the E-PRTR Regulation governs access to information. The competent authorities should set a deadline for when the Register(s) will be up and running and available to the public. This means that information communications technology infrastructure needs to be in place, as well as trained staff to operate the system and that the public should be informed of the databases, their purpose and how to access them. Competent authorities should try to ensure that points of access to the Register are made available, such as generally via a Website on the Internet, on a freely accessible Internet service in public places such as in public libraries or other publicly accessible locations and means, such as on CD, in schools etc., in a public environmental information office in the town centre etc., in Cantonal or Municipal town halls (administrative buildings) etc. or provide a relevant procedure which allows the public to request printed copies of the relevant pages of the Register which they are seeking information about. A reasonable charge may be levied for administration of the latter in accordance with the Aarhus Convention Article 4(8).

Public participation

In accordance with Article 12 of the E-PRTR Regulation, competent authorities should consider the participation of the public in the creation of the Register, including capacity building and opportunities to submit comments, information, analyses, or opinions within a reasonable timeframe. The competent authorities should inform the public about the outcome of such participation and provide procedures for public access to justice in environmental matters in relation to the Register, in accordance with Article 13 of the E-PRTR Regulation. In accordance with Article 15, the public should be informed of the Register and be assisted in using it.

Perhaps it is prudent to designate a competent authority to have specific responsibility for providing the public with access to the Register. In this regard it may be sensible to designate a competent authority that already has, or will have, responsibility for broader access to environmental information/Aarhus

⁶⁶ Article 4(4) of Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC.

Convention implementation requirements in general. Given that BiH is embarking on environmental democracy, as are many Newly Independent States, it is not uncommon to have State bodies with specific responsibilities of this nature.

Other administrative and staff training considerations

A fundamental element of a successful E-PRTR hinges on sound implementation. To this end the competent authorities should provide for staff training by certain deadlines so they can implement and administer the Rulebook. In addition, there should be consideration of training for installation operators and data management staff by a certain deadline (series of workshops etc) in relation to the obligations created under the Rulebook.

Finally, those competent authorities and staff responsible for overseeing the respective elements of implementation – monitoring, data management, and advice to installation operators, quality control and so on – should be nominated. Perhaps here there might be some overlap with those persons responsible for implementation of the environmental permitting and their current job descriptions could be expanded.

Guidance

For effective compliance by installation operators and implementation by competent authorities and persons, guidance could be issued to advise on how to collect, compile and provide data, comply with the Rulebook, implement the Register etc., as considered under Article 14 of the E-PRTR Regulation.

Such guidance could address in particular:

- reporting procedures
- the data to be reported
- quality assurance
- indication of type of withheld data and reasons why they were withheld in the case of confidential data;
- reference to internationally approved release determination and analytical methods, sampling methodologies;
- indication of parent companies;
- how to ‘code’ the activities (i.e., as per IPPC and E-PRTR requirements)

Guidance material could also be made available to the public to assist them in accessing the Register and in understanding the information contained within it.

Finally, other considerations include ensuring that definitions in the Rulebook on Installations and Pollution Register are consistent with those employed in other legislation so as to ensure uniformity and avoid confusion or discrepancy.

Competent authorities should also determine whether the operators of installations will be encouraged to voluntarily supply additional information to the database, though such information is not required by the E-PRTR. Such information might contain insights on environmental management systems in place; staff numbers etc. and may be a good means of providing the public with

useful information while also boosting the profile of an industrial sector. Of course, such ‘promotional’ or other related information should ideally be externally verified. The Kiev Protocol Annex I on ‘Activities’, unlike the equivalent Annex I of the E-PRTR, has an additional column which requires the threshold number of employees at a particular installation to be indicated. It is not a mandatory requirement for the EU to report on employee thresholds as they opted to follow the approach outlined in Article 7(1)(a)(i), (iii) and (iv) of the Kiev Protocol, which comprises the EU capacity and emission thresholds approach.⁶⁷

H. Additional Considerations Under the E-PRTR

The E-PRTR builds upon the EPER and hence implementation of a register on the basis of EPER as a preliminary step, followed by incorporation of the Rulebook for an E-PRTR and the provisions of the E-PRTR therein is a logical step. Drafting a register directly on the basis of the E-PRTR may miss a vital step contained in EPER, even though the E-PRTR will completely replace the EPER. This also gives the competent authorities the chance to ‘phase-in’ the different requirements and to then also stagger the required costs and staffing needs.

Note that the European Commission Guidance on the implementation of the E-PRTR Regulation will assist the BiH Entities with issues such as determination of quality assurance; the setting of penalties; reporting procedures; the data to be reported; indication of type of data withheld and reasons why in cases of confidential data; reference to internationally approved release determination and analytical methods and sampling methodologies; indication of parent companies; coding of activities according to Annex I of the E-PRTR regulation and the IPPC Directive.

I. Conclusions

It is hoped that by outlining the content and aims of the E-PRTR and that through identifying some of the key implementation steps that are required to achieve a fully functioning and EU/UNECE compatible PRTR the Entities might be in a position to begin steps to work in synergy with each other in developing this. The case is clearly strong for having one single database or, if this is not politically acceptable, two identical databases. This paper, and the Commission guidance document⁶⁸ as well as the Kiev Protocol itself will be invaluable to the Entities in

⁶⁷ The EU approach is contrasted with that of the US approach. US reporting is based on employee and manufacture, process and use (MPU) thresholds as per Article 7(1) (ii) and 7(1) (b) of the Kiev Protocol. The US approach to off-site transfer reporting is pollutant-specific as opposed to the EU approach of waste specific. Personal communication with the EU Commission, Directorate-General Environment, C.4 (Industrial Emissions). Parties to the Kiev Protocol have an ‘either/or’ choice in the Article 7 approach they take in relation to reporting requirements.

⁶⁸ The Guidance Document for the Implementation of the European PRTR was published by the European Commission (Directorate-General for Environment) in May 2006.

developing Entity-level implementing legislation for a PRTR and in creating the necessary database(s). The Entities have a considerable way to go in developing a fully functioning PRTR. Of course, this paper cannot cover all the intricacies involved in developing a PRTR and the Entities should avail themselves of the plethora of international guidance and experience that is available to draw upon, coupled with building upon their own experience to date and that of any in-country voluntary initiatives. UNITAR⁶⁹ have proposed a six-step process for PRTR development and this will also be of great help in getting started. For now, noting the potential economic and administrative burdens, BiH should aim to take small but fruitful steps towards development of a PRTR focusing potentially on a few industrial sectors or types of pollutants and progressing from there, particularly as at the moment they are not an EU Member State and have the luxury of gradually being able to build-up to a fully compliant E-PRTR.

Finally, once a PRTR is up and running, the competent authorities of BiH should consider legislating to ensure that they are the body that retains legal control of submitted data. Legislation should be such so as to avoid situations where private companies will be in a position to require that competent authorities themselves purchase data from them, data that should ideally be provided to a competent authority as a matter of law through the implementation of said regulations, international agreements and subsequently, EU Directives.

⁶⁹ United Nations Institute for Training and Development.