UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM SD
SPECIALIZED DISCLOSURE REPORT

Commission file number: 001-16429

ABB Ltd

(Exact name of registrant as specified in its charter)

Switzerland

(Jurisdiction of incorporation or organization)

Affolternstrasse 44
CH-8050 Zurich
Switzerland

(Address of principal executive offices)

Richard A. Brown
Affolternstrasse 44
CH-8050 Zurich
Switzerland
Telephone: +41-43-317-7111
Facsimile: +41-43-317-7992

(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Check the appropriate box to indicate the rule pursuant to which this form is being filed, and provide the period to which the information in this form applies:

☒ Rule 13p-1 under the Securities Exchange Act (17 CFR 240.13p-1) for the reporting period from January 1 to December 31, 2018.

Introduction

ABB Ltd is a corporation organized under the laws of Switzerland. In this Form SD and the attached Conflict Minerals Report (included as Exhibit 1.01), "ABB", the "Company", "we", and "our" refer to ABB Ltd and its consolidated subsidiaries. ABB is a foreign private issuer as defined under Rule 405 of Regulation C under the Securities Act of 1933 and Rule 3b-4 under the Securities Exchange Act of 1934. Our shares are currently listed on the SIX Swiss Exchange, the NASDAQ OMX Stockholm Exchange and the New York Stock Exchange (in the form of American Depositary Shares).

Conflict minerals are defined as cassiterite, columbite-tantalite and wolframite, and their derivatives, which are limited to tin, tantalum and tungsten, as well as gold (3TG). The functionality of a substantial portion of our global product portfolio relies on the use of direct materials, especially electronic components, which include amounts of tin, tantalum, tungsten or gold (*necessary conflict minerals*). For example, tin, tantalum, tungsten and gold are each contained respectively in weld wire, capacitors, electronic contacts and electrical connection coatings, each of which are components in many of our products. Our operating divisions and their products are described in more detail below.

In 2018, we operated our business through four divisions based on products and services. These divisions included: Electrification Products, Industrial Automation, Robotics and Motion, and Power Grids. We also have business operations relating to our remaining engineering, procurement, and construction (EPC) contracts, which are being wound down and managed in a separate business unit outside of these divisions. In December 2018, we announced an agreement to divest 80.1 percent of our Power Grids business to Hitachi Ltd which is expected to be completed during 2020. The scope of our procedures included in this Form SD and the attached Conflict Minerals Report continue to include the operations of the Power Grids business. The description of our divisions and their main products in 2018 is as follows:

- **Electrification Products:** manufactures and sells products and solutions which are designed to provide smarter and safer electrical flow from the substation to the socket. The portfolio of increasingly digital and connected solutions includes electric vehicle charging infrastructure, solar power solutions, modular substation packages, distribution automation products, switchboard and panelboards, switchgear, UPS solutions, circuit breakers, measuring and sensing devices, control products, wiring accessories, enclosures and cabling systems and intelligent home and building solutions, designed to integrate and automate lighting, heating, ventilation, security and data communication networks.

- **Industrial Automation:** develops and sells integrated automation and electrification systems and solutions, such as process and discrete control solutions, advanced process control software and manufacturing execution systems, sensing, measurement and analytical instrumentation and solutions, electric ship propulsion systems, as well as solutions for modern machine and factory automation and large turbochargers. In addition, the division offers a comprehensive range of services ranging from repair to advanced services such as remote monitoring, preventive maintenance and cybersecurity services.

- **Robotics and Motion:** manufactures and sells robotics, motors, generators, drives, wind converters, components and systems for railways and related services and digital solutions for a wide range of applications in industry, transportation and infrastructure, and utilities.

- **Power Grids:** offers a range of products, systems, service and software solutions across the power value chain of generation, transmission and distribution, to utility, industry, transport & infrastructure customers. These offerings address existing and evolving grid needs such as the integration of renewables, digital substations, network control solutions, microgrids and asset management. The division portfolio includes AC and DC transmission systems, substations, as well as a wide range of power, distribution and traction transformers and an array of high-voltage products, such as circuit breakers, switchgear and capacitors.

On June 30, 2018, we acquired GE Industrial Solutions, the global electrification solutions business of General Electric (GEIS). This Form SD and the Conflict Minerals Report attached as Exhibit 1.01 hereto do not cover products manufactured or contracted to be manufactured by GEIS in 2018.

We did not conduct significant due diligence efforts in 2018 for certain businesses which were divested in 2018 including our turnkey AC Substation business which was sold to Linxon, a new joint venture with SNC-Lavalin as well as our terminal block business.

As ABB files reports with the U.S. Securities and Exchange Commission under Section 13(a) of the Securities Exchange Act of 1934, and is a user of *necessary conflict minerals* to produce its manufactured products, ABB is subject to Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (17 CFR Parts 240 and 249b). ABB's Policy on Conflict Minerals can be found at new.abb.com/about/supplying/conflict-minerals-policy

The content of any Web site referred to in this Form SD is included for general information only and is not incorporated by reference in this Form SD.

Section 1 - Conflict Minerals Disclosures

a. We have concluded that during the 2018 calendar year:

i. based on an analysis of our global product offering, we have manufactured products containing conflict minerals and have determined that the use of these minerals is necessary to the functionality or production of these products.

ii. based on the Reasonable Country of Origin Inquiry (RCOI) conducted (see below), we have reason to believe that a portion of the Company's *necessary conflict minerals* originated or may have originated in the Democratic Republic of the Congo (DRC) or an adjoining country[1] (collectively the "covered countries") and may not be from recycled or scrap sources.

b. Description of RCOI

We are a large organization and have manufacturing facilities located around the world. We manufacture products in more than 500 product lines and have approximately 40,000 unique direct material suppliers.

To assess whether the *necessary conflict minerals* in our products originated from the covered countries, we performed a RCOI by identifying direct suppliers of products likely to contain 3TG and surveying a sample of these suppliers using the Conflict Minerals Reporting Template (CMRT) as developed and issued by the Responsible Minerals Initiative (RMI) of the Responsible Business Alliance (RBA) and the Global eSustainability Initiative (GeSI).

During 2018, we continued to increase the quality of the sample of suppliers selected for surveying. Over the past two years, we have invested significant amounts to enhance our systems used to track the link between the components purchased from our suppliers and our products. This has allowed us to improve the quality of our supplier selection process and be more focused on the relevant suppliers of 3TG. In 2018, we refined our product component evaluations and the supplier selection process which contributed to an improvement in the quality of information received from suppliers. We also increased the level of quality required for a supplier response to be accepted. Although the response rate from suppliers was higher in 2018, our increased quality requirements resulted in a higher number of rejected supplier responses. In

1 Adjoining countries of the Democratic Republic of the Congo are: Angola, Burundi, Republic of the Congo, Central African Republic, Rwanda, South Sudan, Tanzania, Uganda and Zambia.

addition, refinements in the supplier survey selection process resulted in a reduction of the number of suppliers who replied and indicated that no 3TG was provided to ABB.

In 2018, we selected our suppliers for surveying based on the identification of components containing 3TG within ABB products. Based on this evaluation, we selected approximately 5,000 suppliers to be surveyed. We believe our current RCOI and the number of surveyed suppliers provides a sufficient level of coverage that we believe could allow us to appropriately assess the conflict status of our products.

As part of our RCOI, suppliers provided us the names of the original smelters/refiners used by them to process 3TG contained in their products. Based on the list of processing facilities we have compiled and based on smelter/refiner-specific country sourcing information we have received through our membership in the RMI, we believe that some of the *necessary conflict minerals* in our products may have originated from the covered countries and were not from recycled or scrap sources. Although most suppliers who responded to our survey were able to provide us with a list of the original smelters/refiners that they identified as being used to process 3TG contained in their products, most of our suppliers were unable to identify and represent which smelters/refiners were specifically used for 3TG in the products or materials supplied to ABB. Therefore, the lists of smelters/refiners provided by suppliers may contain facilities that were not used to process 3TG contained in the components they provided to us.

c. Disclosure of this Form and the Conflict Minerals report

In accordance with Rule 13p-1 under the Securities Exchange Act of 1934, this Specialized Disclosure Form (Form SD) and the associated Conflict Minerals Report are available on our Web site at www.abb.com/investorrelations under “Quarterly results and annual reports”, “2018”, “SEC Filings”.

Section 2 - Exhibits

Exhibit 1.01 - Conflict Minerals Report as required by Items 1.01 and 1.02 of this Form.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the duly authorized undersigned.

ABB LTD

By: /s/ TIMO IHAMUOTILA

Date: May 29, 2019

Name: Timo Ihamuotila
Title: *Executive Vice President and Chief Financial Officer*

By: /s/ RICHARD A. BROWN

Date: May 29, 2019

Name: Richard A. Brown
Title: *Group Senior Vice President and Chief Counsel Corporate & Finance*

Exhibit 1.01

Conflict Minerals Report
ABB Ltd
For the year ended December 31, 2018

This Conflict Minerals Report (CMR) of ABB Ltd for the calendar year 2018 has been prepared pursuant to Rule 13p-1 under the Securities Exchange Act of 1934 ("Rule 13p-1" or the "Rule"). The Rule was adopted by the United States Securities and Exchange Commission (SEC) to implement reporting and disclosure requirements related to conflict minerals as directed by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. The Rule imposes certain reporting obligations on SEC registrants whose manufactured products contain conflict minerals which are necessary to the functionality or production of such products. Conflict minerals are defined as cassiterite, columbite-tantalite and wolframite, and their derivatives, which are limited to tin, tantalum and tungsten, as well as gold (3TG). These requirements apply to SEC registrants whatever the geographic origin of the conflict minerals and whether or not they fund armed conflict.

The functionality of a substantial portion of our global product portfolio relies on the use of direct materials, especially electronic components, which include amounts of tin, tantalum, tungsten or gold (*necessary conflict minerals*). If a registrant can establish that their *necessary conflict minerals* originated from sources other than from a covered country[1], or are from recycled or scrap sources, they must submit a Form SD which describes their determination and the Reasonable Country of Origin Inquiry (RCOI) performed.

If a registrant has reason to believe that any of the conflict minerals in their supply chain may have originated in the covered countries and are not from recycled or scrap sources, or if they are unable to determine the country of origin of those conflict minerals, then the registrant must exercise due diligence on the conflict minerals' source and chain of custody. The registrant must submit a Form SD together with a CMR annually to the SEC that includes a description of those due diligence measures.

Numerous terms in this report are defined in Rule 13p-1 and the associated Form SD and the reader is invited to refer to those sources. The report presented herein is not audited. The content of any Web site referred to in this report is included for general information only and is not incorporated by reference in this Report.

Section 1: Due diligence framework

In accordance with Rule 13p-1, we undertook due diligence efforts, including the RCOI described in the associated Form SD, to determine whether the 3TG in our products originated from sources (e.g. suppliers, smelters, refiners, mines) that did not or do not directly or indirectly finance or benefit armed groups in the covered countries. We designed our due diligence measures to be in conformity, in all material respects, with the internationally recognized due diligence framework set forth in the Organisation for Economic Cooperation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas: Third Edition (2016) (the OECD Framework) and related supplements and its five-step framework.

---

[1] The Democratic Republic of the Congo and its adjoining countries (Angola, Burundi, Republic of the Congo, Central African Republic, Rwanda, South Sudan, Tanzania, Uganda, or Zambia).

Section 2: Due diligence measures undertaken

Our due diligence measures to identify the sources of 3TG contained in our products have progressed and improved every year since we commenced in 2013. In 2018, our due diligence efforts focused on further refining the procedures to identify relevant suppliers while maintaining the other existing company-wide measures. Over the past two years, we enhanced our supply chain information systems to allow us to more effectively identify our suppliers of 3TG and therefore increase the efficiency of the RCOI process. Our due diligence efforts included the following five steps, consistent with the OECD Framework:

Step 1: Establish strong company management systems

We undertook the following measures to establish strong company management systems per Step 1 of the OECD Framework:

Our commitment

- We continued to promote awareness of the conflict minerals program within ABB through a number of communication channels including targeted communications to specific employee groups, adding articles and information videos on the Company's intranet and targeted internal communication letters from our supply chain senior management.
- We maintained a website dedicated to material compliance, including a statement on our position on conflict minerals. The "ABB Policy on Conflict Minerals" with respect to the sourcing of 3TG is published online at new.abb.com/about/supplying/conflict-minerals-policy

Supplier Engagement

- We maintained and communicated our "Supplier Code of Conduct" which requires our suppliers to implement a policy regarding conflict minerals, to exercise due diligence in investigating the source of these minerals, and to respond in a timely manner to ABB's requests for evidence of their compliance with these requirements.
- As part of our supplier onboarding and evaluation process, we invited all new suppliers to take an ABB-specific web-based training course on conflict minerals that covers the highlights of the relevant law and the importance of ethical sourcing to the industry and communicates ABB's policy on conflict minerals. The training also includes guidance for our suppliers on how to complete the Conflict Minerals Reporting Template (CMRT) as developed and issued by the Responsible Minerals Initiative (RMI) of the Responsible Business Alliance (RBA) and the Global eSustainability Initiative (GeSI). In addition, all new suppliers are required to make an initial conflict minerals self-assessment which indicates if the supplier has taken this training course or an equivalent training.
- We continued to require suppliers to adhere to the "ABB General Terms and Conditions for Purchase of Goods" which requires our suppliers to provide requested information regarding the use of 3TG in their products supplied to ABB. In addition (as described on our Web site), these terms and conditions require our suppliers to:
    - work towards ensuring that they do not have 3TG sourced from conflict mines in products supplied to ABB,
    - comply with the ABB Supplier Code of Conduct, including the sections relating to conflict minerals compliance,
    - take the necessary steps to demonstrate that any 3TG contained in the products supplied to ABB do not originate from mines that support or fund conflict within the covered countries, and
    - extend their search further down their supply chain, if necessary, to determine the source of specified minerals.

- For suppliers who continued to provide us with inaccurate or incomplete responses we enhanced our supplier due diligence process by providing these suppliers with additional training in the form of webinars and other follow-up communications to assist in improving the response quality of such suppliers.

Internal Management Systems

- Within our global organization, our operating divisions are extensively involved in executing our conflict minerals activities with support from numerous functions including: supply chain management, legal, technology and finance. The representatives from each operating division come from various backgrounds and have access to the resources within each division, including the research and development, the engineering and the production departments. During 2018, ABB's Head of Group Function Quality and Supply Chain was responsible for the program and program oversight was provided by a Steering Committee. The program was sponsored by two members of our Group Executive Committee, including the head of one of our operating divisions and our General Counsel & Company Secretary.
- We continued to provide our ABB-specific web-based training courses. These are customized for various ABB employee groups (management, buyers, engineering, research and development, product sales and other). Each operating division's conflict minerals leader identified key conflict minerals personnel to undergo mandatory training on conflict minerals.

Company Level Grievance Mechanism

- We maintained our company-wide integrity reporting channels, such as the ABB Business Ethics Hotline, which is available for the reporting of any violations of our Supplier Code of Conduct by our suppliers, including requirements related to conflict minerals. The hotline provides a grievance mechanism and is maintained by an independent third party. It can be used by ABB employees as well as parties outside ABB, such as suppliers. The hotline can be reached by dialing +41-43-317-3367 or by using an internet-based interface at www.compliancestakeholder.com

Step 2: Identify and assess risks in the supply chain

To identify risks in the supply chain, we performed the following:

Use best efforts to identify the smelters and refiners in the supply chain

In 2018, we aimed to identify the smelters and refiners in our supply chain through the survey of 5,000 relevant suppliers as described below. These suppliers identified 309 smelters and refiners of 3TG that were potentially in their supply chains. Our list of these smelters and refiners is included in Annex I, including a summary of their validation status under RMI's Responsible Minerals Assurance Process (RMAP).

Identify the scope of the risk assessment of the 3TG supply chain

In 2018, we further refined our risk assessment process by enhancing the efforts to identify components within our products that are likely to contain 3TG. Over the previous two years, we enhanced our information systems to develop a database linking the components purchased from suppliers to the products that we produce. Our purchased components were evaluated, using ABB experts, including product engineers, material experts and research and development personnel, to determine if the component was likely to contain 3TG. These identified components were then categorized into different levels of risk, depending on the likelihood of 3TG content, the volume of transactions with the supplier and the total value of the components purchased. Based on these evaluations, and the enhanced data available from our information systems, we then identified the relevant suppliers and prioritized which suppliers to survey, focusing on covering the highest-risk suppliers, in terms of 3TG content and amount of products purchased. These suppliers were surveyed using the CMRT, as part of the RCOI described in Form SD.

Assess whether the suppliers have carried out all the elements of due diligence for responsible supply chains of 3TG from conflict-affected and high-risk areas

We have a structured process to send and receive supplier surveys, follow up on non-responses, summarize survey results, and identify and respond to red flags. Using the CMRT, we surveyed the selected suppliers to gather information about smelters/refiners in their supply chain and provide us with a list of those smelters/refiners. We have a dedicated team, in a global shared service center, who reviews the completeness of supplier responses and assesses whether suppliers appeared to have carried out their own appropriate supply chain due diligence. The review team assesses each response for "red flags" (as described in the OECD Framework) and then further assesses the completeness of the supplier response.

Our review team assessed the completeness and accuracy of the list of smelters/refiners provided in the survey responses. This included verifying the name and smelter status by checking against the Smelter Look-up tab list of the RMI's CMRT and the RMI's Conformant Smelter List.

Although the suppliers who responded to our survey were able to provide us with a list of the original smelters/refiners they identified as being used to process 3TG contained in their products, most of our suppliers were unable to identify and represent which smelter/refiner was specifically used for 3TG in the products or materials supplied to ABB. Our list of smelters/refiners identified to be processing or refining 3TG in our products is based on the responses received from our suppliers.

Where suppliers did not respond to the initial survey request, additional follow-up inquiries were made. We also followed up on incomplete or inconsistent supplier responses, requesting additional information or clarification. In certain cases, the follow up was made by product buyers, who worked with suppliers to try to resolve insufficient responses. To assess the accuracy of each of the suppliers' responses, we also compared the names of the reported smelters/refiners against a list received from the RMI of known smelters/refiners, including their conflict status.

For completed surveys, responses were evaluated against a pre-defined list of red flags to determine what corrective action, if any, would be required for the identified risk. A corrective action plan was implemented for the identified red flags, including insufficient responses. Ultimately, the corrective action could include the discontinuation of sourcing from a supplier. Our red flag review process reflects guidance from the OECD Framework. When evaluating ongoing supplier relationships, the conflict minerals compliance status of the supplier was considered when determining the continuation of use for a supplier and in certain cases, supplier relationships with non-cooperative suppliers were terminated.

Step 3: Design and implement a strategy to respond to identified risks

Report findings to designated senior management

Throughout the progress of the supplier survey process, a management reporting dashboard was available to the conflict minerals senior management team on a real-time basis. This provides timely summary statistics on the supplier survey responses as well as the status of our overall risk assessment process. The dashboard also provides a summary of the number of responses currently requiring an escalation process to resolve response deficiencies or address identified red flags. The content of the dashboard was reviewed regularly by a central project team including a review of the progress on addressing responses subject to escalation. These results were also reported to the Steering Committee which evaluated the appropriateness of risk mitigation measures.

Devise and adopt a risk management plan

In 2018, we communicated with our suppliers who were identified to be sourcing 3TG from high-risk smelters/refiners with the aim of encouraging these smelters/refiners to become validated as conformant by RMI's RMAP or, if a smelter/refiner refuses to participate in the process, remove the smelter/refiner from their supply chain. For each supplier identified to be sourcing from a high-risk smelter/refiner, we sent the supplier a letter which requested: (1) that the supplier confirm whether the identified high-risk smelter/refiner is in their supply chain and if such materials were in products supplied to ABB, (2) that the supplier encourage these smelters to participate in RMI's RMAP and (3) that if a smelter/refiner refuses to participate in the RMAP, the supplier should develop a plan to remove the smelter/refiner from their supply chain.

Step 4: Carry out independent third-party audit of smelter/refiner due diligence practices

We are a downstream consumer of 3TG. Generally, we do not purchase raw minerals or ores, and are normally several steps removed from smelters/refiners within our supply chain. Therefore, we do not perform direct audits of those smelters/refiners. We do support the RBA and GeSI's RMI which is a measure contemplated by the *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas*, the internationally recognized standard on which our Company's systems (described in Step 1 above) are based. The data on which we relied for certain statements in this CMR was obtained through our membership in the RMI, using the Reasonable Country of Origin Inquiry report for member "ASEA".

Step 5: Report annually on supply chain due diligence

This report and the associated Form SD are available online at new.abb.com/investorrelations under "Quarterly results and annual reports", "2018", "SEC Filings".

Section 3: Results of due diligence

In 2018, we received and accepted completed reporting templates from 77% of our surveyed suppliers (89% in 2017). The percentage was lower than 2017 as in 2018 we applied a higher quality threshold in order to accept a supplier response. We are in dialogue with the remaining suppliers who provided us with an incomplete or inconsistent response.

Our suppliers are generally several tiers removed from the origin of smelters of their raw materials, and therefore have challenges in performing their due diligence. As a result, the information provided by our suppliers is often incomplete or is not verified, and we are therefore unable to verify with certainty the source and chain of custody of all the 3TG minerals in our supply chain.

In 2018, our supplier responses identified 309 smelters/refiners as being the source of 3TG in their products (302 in 2017). The complete lists of identified smelters/refiners are included in Annex I of this CMR. However, the suppliers only provided the country of origin of the 3TG in a limited number of cases. We obtained further sourcing information through our membership in the RMI which allows us access to the names of the countries of origin for 3TG processed by certain smelters/refiners.

The following tables provide the number of smelters/refiners identified in our supply chain.

Identified Smelters/Refiners								
	RMAP Conformant Smelters/Refiners[1]		RMAP Participating Smelters/Refiners[2]		Other Smelters/Refiners[3]		Total identified	
	2017	**2018**	**2017**	**2018**	**2017**	**2018**	**2017**	**2018**
Gold	101	102	12	7	27	32	140	141
Tantalum	41	40	-	-	-	-	41	40
Tin	70	77	2	2	5	7	77	86
Tungsten	41	40	2	1	1	1	44	42
Total	**253**	**259**	**16**	**10**	**33**	**40**	**302**	**309**

Identified Smelters/Refiners known to be sourcing from the covered countries								
	RMAP Conformant Smelters/Refiners[1]		RMAP Participating Smelters/Refiners[2]		Other Smelters/Refiners[3]		Total identified	
	2017	**2018**	**2017**	**2018**	**2017**	**2018**	**2017**	**2018**
Gold	8	2	-	-	2	-	10	2
Tantalum	2	11	-	-	-	-	2	11
Tin	2	2	-	-	-	-	2	2
Tungsten	1	5	-	-	-	-	1	5
Total	**13**	**20**	**-**	**-**	**2**	**-**	**15**	**20**

(1) Audited and have been found to be conformant with the RMI's Responsible Minerals Assurance Process (RMAP conformant).
(2) In the process of being audited (RMAP Active). This category also includes smelters and refiners who are in communication but have not commenced the validation audit.
(3) Have not commenced the RMAP validation audit.

Through our continued interaction with the RMI, we benefited from their activities, including their efforts to validate smelters as 'RMAP conformant' in line with current global standards. The percentage of the identified smelters/refiners which are currently designated as RMAP conformant is 84% and was the same level in 2017. Most of the facilities removed from the smelter/refiner list were not assessed as RMAP conformant in 2017. Over the past three years, the rate of RMAP conformant smelters/refiners has increased significantly due to the completion of audits for several facilities. In 2018 the smelters/refiners identified as sourcing from the covered countries reached a 100% rate of RMAP conformant status.

We have not been able to determine the conflict status for all smelters/refiners used in our supply chain. However, based on the information that we have received from our suppliers, we have not identified any smelters/refiners in our supply chain which are known to be sourcing 3TG that directly or indirectly finances or benefits armed groups in the covered countries.

As allowed by the *Statement on the Effect of the Recent Court of Appeals Decision on the Conflict Minerals Rule*, issued by the SEC on April 29, 2014, ABB has not described its products as "DRC conflict free" or "having not been found to be 'DRC conflict free'".

Section 4: Continuous improvement efforts to mitigate risk

During 2018, our conflict minerals program achieved the following improvements:

- for suppliers identified as sourcing from high-risk smelters/refiners, implemented a communication process aimed at encouraging these smelters/refiners to become validated as conformant by RMI's RMAP or, if these smelters/refiners refuse to participate in the process, remove the smelter/refiner from their supply chain,
- maintained and updated our listing of components which are likely to contain 3TG within each of our various product offerings,
- enhanced our conflict minerals data management systems to more effectively assess supplier responses and to assist in making conclusions on the conflict free status of our products,
- further refined the scope of the supplier surveys and removed previously surveyed suppliers that ultimately were determined to not be supplying 3TG,
- increased the level of response quality required to be an accepted supplier response,
- reduced the percentage of surveyed suppliers confirming that they did not provide products containing 3TG,
- continued to promote awareness about the program inside the organization through training and communication,
- provided engaged suppliers with our conflict minerals training, and
- for smelters/refiners which have been identified as being a high-risk of non-conformant sourcing practices, we have implemented a due diligence process to follow up with our suppliers who are using such smelters/refiners. The purpose is to promote an ethical supply chain and reduce the risk that ABB has 3TG in its products from smelters that are not RMAP conformant.

During 2019, we plan to take the following steps as part of our due diligence program:

- continue to work to increase the response rate and quality of supplier responses by:
  - working directly with our suppliers on the completion of their CMRT including direct engagement of our largest and key suppliers, and
  - providing additional conflict minerals training to suppliers who have been unable to provide sufficient response quality.
- continue to support the initiatives of the RMI through involvement in the RMI Smelter Engagement Team focusing on gold, seeking to bring legitimate non-certified gold smelters into the RMAP program and assess their compliance for certification as RMAP conformant smelters,
- continue to include a conflict minerals clause in new or renewed supplier contracts that requires suppliers to provide us with necessary 3TG sourcing information,
- continue to follow the OECD due diligence guidance and be involved in relevant trade associations in order to define and improve best practices and encourage responsible sourcing of 3TG,
- for smelters/refiners which have been identified as being a high-risk of non-conformant sourcing practices, we plan to continue to enhance the due diligence process to follow up with our suppliers who are using these smelters/refiners. The purpose is to promote an ethical supply chain and reduce the risk that ABB has 3TG in its products which is not conflict-free, and
- continue to track uncooperative suppliers and consider terminating our relationship with these suppliers.

Section 5: Independent audit

As ABB has not concluded on the DRC conflict status for any of its products, this CMR does not require an independent private sector audit.

Annex I – Lists of smelters/refiners

The lists of smelters/refiners were produced by consolidating information we have received from our suppliers. We have provided conflict minerals training to our suppliers and independently verified the status of the smelters/refiners using RMI and other data, but we cannot guarantee that the data we have been provided is accurate or complete. In most cases suppliers have not been able to confirm that these smelters/refiners have been used in the products they have supplied to us because they were not able to provide the CMRT at the product level. Therefore it is possible that the lists contain smelters/refiners which were not used to process 3TG contained in our products.

We generally do not have direct business relationships with any of the smelters/refiners listed below. In general, we are several tiers removed from smelters/refiners and therefore unable to exert direct influence over smelters/refiners. Due to the size of our supplier base and the complexity of global supply chains, we are also unable to clearly trace at what stage individual smelters/refiners enter the supply chain of our direct suppliers.

RMAP conformant smelters/refiners

Metal	Smelter Name	Country
Gold	L'Orfebre S.A.	Andorra
Gold	Western Australian Mint (T/a The Perth Mint)	Australia
Gold	Ogussa Osterreichische Gold- und Silber-Scheideanstalt GmbH	Austria
Gold	Umicore S.A. Business Unit Precious Metals Refining	Belgium
Gold	AngloGold Ashanti Corrego do Sitio Mineracao	Brazil
Gold	Marsam Metals	Brazil
Gold	Umicore Brasil Ltda.	Brazil
Gold	CCR Refinery - Glencore Canada Corporation	Canada
Gold	Royal Canadian Mint	Canada
Gold	Asahi Refining Canada Ltd.	Canada
Gold	Planta Recuperadora de Metales SpA	Chile
Gold	Gold Refinery of Zijin Mining Group Co., Ltd.	China
Gold	Zhongyuan Gold Smelter of Zhongjin Gold Corporation	China
Gold	The Refinery of Shandong Gold Mining Co., Ltd.	China
Gold	Sichuan Tianze Precious Metals Co., Ltd.	China
Gold	Shandong Zhaojin Gold & Silver Refinery Co., Ltd.	China
Gold	Metalor Technologies (Hong Kong) Ltd.	China
Gold	Metalor Technologies (Suzhou) Ltd.	China
Gold	Jiangxi Copper Co., Ltd.	China
Gold	Inner Mongolia Qiankun Gold and Silver Refinery Share Co., Ltd.	China
Gold	Heraeus Metals Hong Kong Ltd.	China
Gold	SAAMP	France
Gold	Allgemeine Gold-und Silberscheideanstalt A.G.	Germany
Gold	WIELAND Edelmetalle GmbH	Germany
Gold	SAXONIA Edelmetalle GmbH	Germany
Gold	Aurubis AG	Germany
Gold	C. Hafner GmbH + Co. KG	Germany

Metal	Smelter Name	Country
Gold	DODUCO Contacts and Refining GmbH	Germany
Gold	Heimerle + Meule GmbH	Germany
Gold	Heraeus Precious Metals GmbH & Co. KG	Germany
Gold	Bangalore Refinery	India
Gold	MMTC-PAMP India Pvt., Ltd.	India
Gold	PT Aneka Tambang (Persero) Tbk	Indonesia
Gold	Safimet S.p.A	Italy
Gold	Italpreziosi	Italy
Gold	8853 S.p.A.	Italy
Gold	T.C.A S.p.A	Italy
Gold	Chimet S.p.A.	Italy
Gold	Aida Chemical Industries Co., Ltd.	Japan
Gold	Asahi Pretec Corp.	Japan
Gold	Asaka Riken Co., Ltd.	Japan
Gold	Yokohama Metal Co., Ltd.	Japan
Gold	Yamakin Co., Ltd.	Japan
Gold	Tokuriki Honten Co., Ltd.	Japan
Gold	Tanaka Kikinzoku Kogyo K.K.	Japan
Gold	Sumitomo Metal Mining Co., Ltd.	Japan
Gold	Dowa	Japan
Gold	Eco-System Recycling Co., Ltd.	Japan
Gold	Ohura Precious Metal Industry Co., Ltd.	Japan
Gold	Nihon Material Co., Ltd.	Japan
Gold	Mitsui Mining and Smelting Co., Ltd.	Japan
Gold	Mitsubishi Materials Corporation	Japan
Gold	Matsuda Sangyo Co., Ltd.	Japan
Gold	Kojima Chemicals Co., Ltd.	Japan
Gold	JX Nippon Mining & Metals Co., Ltd.	Japan
Gold	Japan Mint	Japan
Gold	Ishifuku Metal Industry Co., Ltd.	Japan
Gold	Kazzinc	Kazakhstan
Gold	DS PRETECH Co., Ltd.	Korea, Republic of
Gold	SungEel HiMetal Co., Ltd.	Korea, Republic of
Gold	Korea Zinc Co., Ltd.	Korea, Republic of
Gold	Daejin Indus Co., Ltd.	Korea, Republic of
Gold	DSC (Do Sung Corporation)	Korea, Republic of
Gold	Torecom	Korea, Republic of
Gold	LS-NIKKO Copper Inc.	Korea, Republic of
Gold	HeeSung Metal Ltd.	Korea, Republic of

Metal	Smelter Name	Country
Gold	Kyrgyzaltyn JSC	Kyrgyzstan
Gold	Metalurgica Met-Mex Penoles S.A. De C.V.	Mexico
Gold	REMONDIS PMR B.V.	Netherlands
Gold	Bangko Sentral ng Pilipinas (Central Bank of the Philippines)	Philippines
Gold	SOE Shyolkovsky Factory of Secondary Precious Metals	Russian Federation
Gold	OJSC Novosibirsk Refinery	Russian Federation
Gold	Prioksky Plant of Non-Ferrous Metals	Russian Federation
Gold	OJSC "The Gulidov Krasnoyarsk Non-Ferrous Metals Plant" (OJSC Krastsvetmet)	Russian Federation
Gold	Moscow Special Alloys Processing Plant	Russian Federation
Gold	JSC Uralelectromed	Russian Federation
Gold	Metalor Technologies (Singapore) Pte., Ltd.	Singapore
Gold	AU Traders and Refiners	South Africa
Gold	Rand Refinery (Pty) Ltd.	South Africa
Gold	SEMPSA Joyeria Plateria S.A.	Spain
Gold	Boliden AB	Sweden
Gold	Argor-Heraeus S.A.	Switzerland
Gold	Cendres + Metaux S.A.	Switzerland
Gold	Valcambi S.A.	Switzerland
Gold	PX Precinox S.A.	Switzerland
Gold	PAMP S.A.	Switzerland
Gold	Metalor Technologies S.A.	Switzerland
Gold	Singway Technology Co., Ltd.	Taiwan, Province of China
Gold	Solar Applied Materials Technology Corp.	Taiwan, Province of China
Gold	Umicore Precious Metals Thailand	Thailand
Gold	Nadir Metal Rafineri San. Ve Tic. A.S.	Turkey
Gold	Istanbul Gold Refinery	Turkey
Gold	Emirates Gold DMCC	United Arab Emirates
Gold	Al Etihad Gold Refinery DMCC	United Arab Emirates
Gold	Advanced Chemical Company	United States
Gold	Geib Refining Corporation	United States
Gold	United Precious Metal Refining, Inc.	United States
Gold	Metalor USA Refining Corporation	United States
Gold	Materion	United States
Gold	Kennecott Utah Copper LLC	United States
Gold	Asahi Refining USA Inc.	United States
Gold	Almalyk Mining and Metallurgical Complex (AMMC)	Uzbekistan
Tantalum	Resind Industria e Comercio Ltda.	Brazil

Metal	Smelter Name	Country
Tantalum	Mineracao Taboca S.A.	Brazil
Tantalum	LSM Brasil S.A.	Brazil
Tantalum	Jiujiang Janny New Material Co., Ltd.	China
Tantalum	Jiangxi Tuohong New Raw Material	China
Tantalum	Changsha South Tantalum Niobium Co., Ltd.	China
Tantalum	Jiangxi Dinghai Tantalum & Niobium Co., Ltd.	China
Tantalum	XinXing HaoRong Electronic Material Co., Ltd.	China
Tantalum	Jiujiang Zhongao Tantalum & Niobium Co., Ltd.	China
Tantalum	FIR Metals & Resource Ltd.	China
Tantalum	Hengyang King Xing Lifeng New Materials Co., Ltd.	China
Tantalum	Guangdong Rising Rare Metals-EO Materials Ltd.	China
Tantalum	Yanling Jincheng Tantalum & Niobium Co., Ltd.	China
Tantalum	F&X Electro-Materials Ltd.	China
Tantalum	Ningxia Orient Tantalum Industry Co., Ltd.	China
Tantalum	Guangdong Zhiyuan New Material Co., Ltd.	China
Tantalum	Jiujiang Tanbre Co., Ltd.	China
Tantalum	JiuJiang JinXin Nonferrous Metals Co., Ltd.	China
Tantalum	NPM Silmet AS	Estonia
Tantalum	H.C. Starck Smelting GmbH & Co. KG	Germany
Tantalum	H.C. Starck Hermsdorf GmbH	Germany
Tantalum	H.C. Starck Tantalum and Niobium GmbH	Germany
Tantalum	Metallurgical Products India Pvt., Ltd.	India
Tantalum	Asaka Riken Co., Ltd.	Japan
Tantalum	Global Advanced Metals Aizu	Japan
Tantalum	H.C. Starck Ltd.	Japan
Tantalum	Taki Chemical Co., Ltd.	Japan
Tantalum	Mitsui Mining and Smelting Co., Ltd.	Japan
Tantalum	Ulba Metallurgical Plant JSC	Kazakhstan
Tantalum	KEMET Blue Metals	Mexico
Tantalum	Power Resources Ltd.	Macedonia
Tantalum	Solikamsk Magnesium Works OAO	Russian Federation
Tantalum	H.C. Starck Co., Ltd.	Thailand
Tantalum	KEMET Blue Powder	United States
Tantalum	Global Advanced Metals Boyertown	United States
Tantalum	H.C. Starck Inc.	United States
Tantalum	D Block Metals, LLC	United States
Tantalum	Telex Metals	United States
Tantalum	QuantumClean	United States
Tantalum	Exotech Inc.	United States

Metal	Smelter Name	Country
Tin	Metallo Belgium N.V.	Belgium
Tin	EM Vinto	Bolivia
Tin	Operaciones Metalurgicas S.A.	Bolivia
Tin	Resind Industria e Comercio Ltda.	Brazil
Tin	Melt Metais e Ligas S.A.	Brazil
Tin	Magnu's Minerais Metais e Ligas Ltda.	Brazil
Tin	White Solder Metalurgia e Mineracao Ltda.	Brazil
Tin	Soft Metais Ltda.	Brazil
Tin	Mineracao Taboca S.A.	Brazil
Tin	Chifeng Dajingzi Tin Industry Co., Ltd.	China
Tin	Guangdong Hanhe Non-Ferrous Metal Co., Ltd.	China
Tin	Gejiu Jinye Mineral Company	China
Tin	Guanyang Guida Nonferrous Metal Smelting Plant	China
Tin	Gejiu Fengming Metallurgy Chemical Plant	China
Tin	HuiChang Hill Tin Industry Co., Ltd.	China
Tin	Chenzhou Yunxiang Mining and Metallurgy Co., Ltd.	China
Tin	Yunnan Tin Company Limited	China
Tin	Yunnan Chengfeng Non-ferrous Metals Co., Ltd.	China
Tin	Gejiu Yunxin Nonferrous Electrolysis Co., Ltd.	China
Tin	Gejiu Non-Ferrous Metal Processing Co., Ltd.	China
Tin	Gejiu Zili Mining And Metallurgy Co., Ltd.	China
Tin	Jiangxi New Nanshan Technology Ltd.	China
Tin	China Tin Group Co., Ltd.	China
Tin	Gejiu Kai Meng Industry and Trade LLC	China
Tin	Huichang Jinshunda Tin Co., Ltd.	China
Tin	PT Rajawali Rimba Perkasa	Indonesia
Tin	PT Bangka Serumpun	Indonesia
Tin	PT Lautan Harmonis Sejahtera	Indonesia
Tin	PT Menara Cipta Mulia	Indonesia
Tin	PT Kijang Jaya Mandiri	Indonesia
Tin	PT Sukses Inti Makmur	Indonesia
Tin	PT Bangka Prima Tin	Indonesia
Tin	PT Rajehan Ariq	Indonesia
Tin	CV Dua Sekawan	Indonesia
Tin	CV Ayi Jaya	Indonesia
Tin	PT Inti Stania Prima	Indonesia
Tin	PT ATD Makmur Mandiri Jaya	Indonesia
Tin	PT Tirus Putra Mandiri	Indonesia
Tin	CV Venus Inti Perkasa	Indonesia

Metal	Smelter Name	Country
Tin	CV Gita Pesona	Indonesia
Tin	PT Aries Kencana Sejahtera	Indonesia
Tin	PT Premium Tin Indonesia	Indonesia
Tin	CV United Smelting	Indonesia
Tin	PT Tommy Utama	Indonesia
Tin	PT Tinindo Inter Nusa	Indonesia
Tin	PT Timah Tbk Mentok	Indonesia
Tin	PT Timah Tbk Kundur	Indonesia
Tin	PT Sumber Jaya Indah	Indonesia
Tin	PT Stanindo Inti Perkasa	Indonesia
Tin	PT Sariwiguna Binasentosa	Indonesia
Tin	PT Refined Bangka Tin	Indonesia
Tin	PT Prima Timah Utama	Indonesia
Tin	PT Panca Mega Persada	Indonesia
Tin	PT Mitra Stania Prima	Indonesia
Tin	PT Karimun Mining	Indonesia
Tin	PT DS Jaya Abadi	Indonesia
Tin	PT Bukit Timah	Indonesia
Tin	PT Belitung Industri Sejahtera	Indonesia
Tin	PT Bangka Tin Industry	Indonesia
Tin	PT Babel Surya Alam Lestari	Indonesia
Tin	PT Babel Inti Perkasa	Indonesia
Tin	PT Artha Cipta Langgeng	Indonesia
Tin	Dowa	Japan
Tin	Mitsubishi Materials Corporation	Japan
Tin	Modeltech Sdn Bhd	Malaysia
Tin	Malaysia Smelting Corporation (MSC)	Malaysia
Tin	Minsur	Peru
Tin	O.M. Manufacturing Philippines, Inc.	Philippines
Tin	Fenix Metals	Poland
Tin	Metallo Spain S.L.U.	Spain
Tin	Rui Da Hung	Taiwan, Province of China
Tin	Thaisarco	Thailand
Tin	O.M. Manufacturing (Thailand) Co., Ltd.	Thailand
Tin	Tin Technology & Refining	United States
Tin	Alpha	United States
Tin	Metallic Resources, Inc.	United States
Tin	Thai Nguyen Mining and Metallurgy Co., Ltd.	Vietnam
Tungsten	Wolfram Bergbau und Hutten AG	Austria

Metal	Smelter Name	Country
Tungsten	ACL Metais Eireli	Brazil
Tungsten	Xinfeng Huarui Tungsten & Molybdenum New Material Co., Ltd.	China
Tungsten	South-East Nonferrous Metal Company Limited of Hengyang City	China
Tungsten	Ganzhou Haichuang Tungsten Co., Ltd.	China
Tungsten	Hunan Chuangda Vanadium Tungsten Co., Ltd. Wuji	China
Tungsten	Jiangwu H.C. Starck Tungsten Products Co., Ltd.	China
Tungsten	Guangdong Xianglu Tungsten Co., Ltd.	China
Tungsten	Chenzhou Diamond Tungsten Products Co., Ltd.	China
Tungsten	Chongyi Zhangyuan Tungsten Co., Ltd.	China
Tungsten	Ganzhou Seadragon W & Mo Co., Ltd.	China
Tungsten	Jiangxi Gan Bei Tungsten Co., Ltd.	China
Tungsten	Xiamen Tungsten (H.C.) Co., Ltd.	China
Tungsten	Malipo Haiyu Tungsten Co., Ltd.	China
Tungsten	Jiangxi Tonggu Non-ferrous Metallurgical & Chemical Co., Ltd.	China
Tungsten	Jiangxi Xinsheng Tungsten Industry Co., Ltd.	China
Tungsten	Jiangxi Yaosheng Tungsten Co., Ltd.	China
Tungsten	Ganzhou Jiangwu Ferrotungsten Co., Ltd.	China
Tungsten	Xinhai Rendan Shaoguan Tungsten Co., Ltd.	China
Tungsten	Xiamen Tungsten Co., Ltd.	China
Tungsten	Fujian Jinxin Tungsten Co., Ltd.	China
Tungsten	Ganzhou Huaxing Tungsten Products Co., Ltd.	China
Tungsten	Hunan Chunchang Nonferrous Metals Co., Ltd.	China
Tungsten	Hunan Chenzhou Mining Co., Ltd.	China
Tungsten	H.C. Starck Smelting GmbH & Co. KG	Germany
Tungsten	H.C. Starck Tungsten GmbH	Germany
Tungsten	A.L.M.T. Corp.	Japan
Tungsten	Japan New Metals Co., Ltd.	Japan
Tungsten	Woltech Korea Co., Ltd.	Korea, Republic of
Tungsten	Philippine Chuangxin Industrial Co., Inc.	Philippines
Tungsten	Moliren Ltd.	Russian Federation
Tungsten	Unecha Refractory metals plant	Russian Federation
Tungsten	Hydrometallurg, JSC	Russian Federation
Tungsten	Kennametal Huntsville	United States
Tungsten	Niagara Refining LLC	United States
Tungsten	Global Tungsten & Powders Corp.	United States
Tungsten	Kennametal Fallon	United States
Tungsten	Masan Tungsten Chemical LLC (MTC)	Vietnam
Tungsten	Asia Tungsten Products Vietnam Ltd.	Vietnam
Tungsten	Tejing (Vietnam) Tungsten Co., Ltd.	Vietnam

RMAP participating smelters/refiners

Metal	Smelter Name	Country
Gold	Daye Non-Ferrous Metals Mining Ltd.	China
Gold	Chugai Mining	Japan
Gold	TOO Tau-Ken-Altyn	Kazakhstan
Gold	Kazakhmys Smelting LLC	Kazakhstan
Gold	NH Recytech Company	Korea, Republic of
Gold	KGHM Polska Miedz Spolka Akcyjna	Poland
Gold	Dijllah Gold Refinery FZC	United Arab Emirates
Tin	Ma'anshan Weitai Tin Co., Ltd.	China
Tin	Dongguan CiEXPO Environmental Engineering Co., Ltd.	China
Tungsten	Hunan Litian Tungsten Indistry Co., Ltd.	China

Other smelters/refiners

Metal	Smelter Name	Country
Gold	Tony Goetz NV	Belgium
Gold	Shandong Humon Smelting Co., Ltd.	China
Gold	Guangdong Jinding Gold Limited	China
Gold	Tongling Nonferrous Metals Group Co., Ltd.	China
Gold	Great Wall Precious Metals Co., Ltd. of CBPM	China
Gold	Shandong Tiancheng Biological Gold Industrial Co., Ltd.	China
Gold	Penglai Penggang Gold Industry Co., Ltd.	China
Gold	Luoyang Zijin Yinhui Gold Refinery Co., Ltd.	China
Gold	Lingbao Jinyuan Tonghui Refinery Co., Ltd.	China
Gold	Lingbao Gold Co., Ltd.	China
Gold	Hunan Guiyang yinxing Nonferrous Smelting Co., Ltd.	China
Gold	Hunan Chenzhou Mining Co., Ltd.	China
Gold	Hangzhou Fuchunjiang Smelting Co., Ltd.	China
Gold	Guoda Safina High-Tech Environmental Refinery Co., Ltd.	China
Gold	Refinery of Seemine Gold Co., Ltd.	China
Gold	Yunnan Copper Industry Co., Ltd.	China
Gold	Degussa Sonne / Mond Goldhandel GmbH	Germany
Gold	Sai Refinery	India
Gold	GCC Gujrat Gold Centre Pvt. Ltd.	India
Gold	Samduck Precious Metals	Korea, Republic of
Gold	State Research Institute Center for Physical Sciences and Technology	Lithuania
Gold	Modeltech Sdn Bhd	Malaysia
Gold	Kyshtym Copper-Electrolytic Plant ZAO	Russian Federation
Gold	Sudan Gold Refinery	Sudan
Gold	African Gold Refinery	Uganda
Gold	Fujairah Gold FZC	United Arab Emirates
Gold	International Precious Metal Refiners	United Arab Emirates
Gold	Abington Reldan Metals, LLC	United States
Gold	QG Refining, LLC	United States
Gold	Pease & Curren	United States
Gold	Sabin Metal Corp.	United States
Gold	Navoi Mining and Metallurgical Combinat	Uzbekistan
Tin	Super Ligas	Brazil
Tin	Estanho de Rondonia S.A.	Brazil
Tin	Pongpipat Company Limited	Myanmar
Tin	Electro-Mechanical Facility of the Cao Bang Minerals & Metallurgy Joint Stock Company	Vietnam
Tin	An Vinh Joint Stock Mineral Processing Company	Vietnam

Metal	Smelter Name	Country
Tin	Tuyen Quang Non-Ferrous Metals Joint Stock Company	Vietnam
Tin	Nghe Tinh Non-Ferrous Metals Joint Stock Company	Vietnam
Tungsten	Jiangxi Dayu Longxintai Tungsten Co., Ltd.	China

Based on country of origin information provided by the RMI for RMAP conformant processing facilities, countries of origin of the 3TG in our products may include:

Australia
Austria
Argentina
Armenia
Azerbaijan
Benin
Bolivia
Botswana
Brazil
Burkina Faso
Burundi
Canada
Chile
China
Colombia
Congo, Democratic Republic of the
Cyprus
Dominican Republic
Ecuador
Egypt
Eritrea
Ethiopia
Finland
Georgia
Ghana
Guatemala
Guinea
Guyana
Honduras
India
Indonesia
Iran
Ivory Coast
Kazakhstan
Kenya
Kyrgyzstan
Laos
Lebanon
Madagascar
Malaysia
Mali
Mauritania
Mauritius
Mexico
Mongolia
Morocco
Mozambique
Myanmar
Namibia
Nicaragua
Niger
Nigeria
Papua New Guinea
Peru
Philippines
Portugal
Puerto Rico
Russian Federation
Rwanda
Saudi Arabia
Senegal
Sierra Leone
Slovakia
Solomon Islands
South Africa
Spain
Suriname
Swaziland
Sweden
Taiwan, Province of China
Tanzania
Thailand
Togo
Turkey
Uganda
United Kingdom
United States of America
Uruguay
Uzbekistan
Venezuela
Zambia
Zimbabwe