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Apple and Conflict Minerals: Ethical Sourcing for Sustainability

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Apple and Conflict Minerals: Ethical Sourcing for Sustainability

ABSTRACT

The success of Apple Inc.'s products like the iPhone and the iPad made the company rely on manufacturers in Asia to produce its products at a lower cost. Since these manufacturers were not too particular about checking the origins of the minerals they used, Apple had to face accusations by activists that it was using conflict minerals in its products. These conflict minerals led to the abuse of human rights in the strife torn parts of the world. Extraction and sale of conflict minerals like tin, tungsten, and tantalum extracted from illegal mines in the Democratic Republic of Congo (Congo) and surrounding countries funded armed militia who fought against the government and violated the human rights of people living in the conflict prone areas. Apple had taken various initiatives to tackle the challenge of conflict minerals since it started facing the heat from some activist groups in 2010. Despite all the efforts made by Apple, the company faced an uphill task. The problem for Apple was compounded by the fact that the supply chain for such minerals was opaque and it was not so easy to determine which refiners and smelters around the world were financially fueling violence in the war-torn regions. There was also the possibility that such minerals could slip into its supply chain through indirect routes. Going forward, the question before Apple was what more could the company do to ensure that all its products were free from conflict minerals. How could it ensure that the procurement of minerals through its supply chain did not profit armed groups in producer countries? How could it assure stakeholders that their products did not contain any primary commodities that were linked to the funding of conflicts? How could it ensure all these, while also seeing to it that the action taken by the company does not have an adverse effect on the livelihoods of people who work in and around artisanal mines and their communities?

“Apple has started to recognize that supply chain problems start well before factories – the next step should be extending this scrutiny to other raw materials used in its products and packaging.”ⁱ

**– Julian Kirby, Resource Use Campaigner at Friends of the Earth¹,
in February 2014.**

In May 2014, Apple Inc. (Apple) released its first conflict minerals report which gave complete details of the places and smelters from which it secured the key materials used in making its products like smartphones, tablets, and computers.ⁱⁱ In the report, Apple claimed that the majority of its suppliers were certified as conflict free. The controversy over the use of conflict minerals from places like Africa was one of the major public relations issues that Apple had had to face in its history. Starting in the year 2010, Apple along with some other major technology companies started facing criticism from activist groups on the use of conflict minerals whose trade was leading to the abuse of human rights in places like the Democratic Republic of Congo (Congo). Activists from Congo and other parts of the world started urging Apple to take proper steps to control the use of minerals used in its products. Responding to the crisis, Apple initiated action to control the damage. In the year 2010, it became the first company to publicly declare the number of smelters in its supply chain (*See Exhibit I for the Supply Chain Model of Apple*). Apple had also put pressure on the smelters in its supply chain to get certified as conflict free by independent third party auditors. It provided all the required support to its suppliers for analyzing the sources of their minerals and in getting certified as conflict free. It also started a unique smelter training program for training the management and staff of the smelters.

By the year 2014, Apple had increased its efforts to make its products conflict free. In its eight annual Supplier Responsibility Report released in February 2014, Apple claimed that its entire supply of tantalum was verified as being conflict free. Apple also believed in pushing a large number of suppliers to get audited instead of limiting its sourcing to a small number of suppliers who had already been certified as conflict free. It believed that being one of the largest users of conflict products in its products, it was in a privileged position to improve the human rights records in countries like Congo. Apple's efforts at ethically sourcing the minerals used in its products were not limited to a few countries in Africa. It started similar initiatives in Indonesia where illegal mining of tin was causing damage to the environment and hurting the lives of miners. Through its continued efforts, Apple hoped to make all the smelters in its supply chain conflict free in the long run. Despite all the efforts made by Apple, some activists and industry analysts continued to criticize the company saying that it was responding to the crisis too late and doing too little. The problem for Apple was compounded by the fact that the supply chain for such minerals was opaque and it was not so easy to determine which refiners and smelters around the world were financially fueling violence in the war-torn regions. There was also the possibility that such minerals could slip into its supply chain through indirect routes. Going forward, the question before Apple was what more could the company do to ensure that all its products were free from conflict minerals. How could it ensure that the procurement of minerals through its supply chain did not profit armed groups in producer countries? How could it assure stakeholders that their products did not contain any primary commodities that were linked to the funding of conflicts? Should the company go a step further and make this issue “its own issue”, thus taking a clear leadership position? If so, how can Apple pull this off?

BACKGROUND NOTE

Apple was established on April 1, 1976, and incorporated on January 3, 1977. The company was initially called Apple Computers Inc. and was a maker of personal computers. By 1980, the company had annual revenue of US\$ 100 million and 1,000 employees. Thanks to the

¹ Friends of the Earth, headquartered in London, UK, campaigns for finding solutions to the environmental problems around the world.

success of its initial launches, Apple continued to grow. The company went public in December 1980. Since 1980, Apple started facing stiff competition from other leading players in the market like International Business Machines Corporation² (IBM). Apple could not withstand the competition from IBM when the latter launched its own personal computers powered by MS-DOS (Microsoft disk operating system) and a revolutionary spread sheet application called Lotus 1-2-3. However, Apple bounced back with the launch of its Lisa and Macintosh brand of personal computers in the years 1983 and 1984. With these computers, it introduced the Graphical User Interface (GUI), which became a milestone in the computing industry. GUI made computing user friendly and induced a lot more people to buy personal computers. However, despite the groundbreaking features and ease of functionality they offered, the Lisa and Macintosh computers were a commercial flop in the market.

Apple's performance hit a nadir in the mid-1980s, leading to the exit of its cofounder Steve Jobs (Jobs) in 1985. Jobs's exit was orchestrated by its then CEO, John Sculley (Sculley). The sales of Apple's personal computers picked up under Sculley's leadership. Under Sculley, Apple introduced some other products like the laser printer, laser writer, and page maker that further helped in improving its sales. Another milestone in its history was reached in the year 1991 with the introduction of the Powerbook 100, which was considered to be the predecessor of the modern laptops. Since the release of the Powerbook 100, Apple started to emphasize the quality and design of its products. At the same time, Apple began its foray into the consumer electronics market with products such as Newton (a Personal Digital Assistant) with moderate success.

The success of Microsoft Corporation's³ Windows 95 OS and the increased competition from new players in the market relegated Apple to the position of a marginal player in the computer industry. Apple had also started to lose its market share rapidly. Many industry analysts predicted that Apple would be wound up or sold off to the competitors. Microsoft, with its strong control over the global personal computing industry, had emerged as Apple's arch rival. In the year 1996, Apple acquired NeXT Software Inc. (NeXT), a company founded by Jobs in 1985 after he exited Apple. NeXT focused on the workstation computers segment and targeted the education market. Soon after the acquisition of NeXT, Jobs was appointed the CEO of Apple. Under Jobs, Apple's fortunes began to revive.

Jobs launched a new operating system for computers made by Apple called the Mac OS X, which was based on the NeXT operating system. Jobs started to give more importance to the design of Apple's products after his return to Apple. He cut a number of loss making projects at the company and started taking steps to make Apple profitable again. Another key product of Apple called the iMac was launched in the year 1998. The iMac was a good commercial success and repositioned Apple in the market for personal computers. After the success of the iMac, Apple tried its luck in the market for consumer electronics goods with the launch of the revolutionary portable player, the iPod, in 2001. The iPod was a resounding success in the market and changed the way people listened to music. The iPod was followed by the first smartphone from Apple called the iPhone in 2007. iPhone rewrote the rules of the high-end mobile phone market and wiped out a number of existing makers of smartphones. iPhone's killer feature was its multi-touch user interface and its operating system, the iOS. In the year 2007, Apple removed the word 'Computer' from its name and became Apple, Inc. to mark its complete transition into a consumer electronics goods company.

Apple launched a tablet computer called the iPad in 2010 and emerged as the leading technology company in the world. After the death of Jobs in the year 2011, Tim Cook (Cook) took over as the CEO of Apple. However, Apple never recovered the ground it had lost in the area of personal computers and continued to languish behind Microsoft. For the fiscal year 2014, Apple's revenues stood at US\$ 182.8 billion (*See Exhibit II for Selected Financials of*

² International Business Machine Corporation, headquartered in Armonk, New York, USA, is one of the leading information technology companies in the world.

³ Microsoft Corporation is an American company that designs and sells many products related to the computer industry. It is headquartered at Redmond, Washington, USA.

Apple). However, under Cook, the company made some buzz on the sustainability front. In particular, it shed its tag of being an environmental laggard. In early 2014, at an annual shareholder meeting, Cook was asked to disclose the costs of Apple's energy sustainability programs and to make a commitment to doing only those things that were profitable. The usually calm and composed Cook burst out saying that he did not consider "bloody ROI" in all the activities that Apple engaged in. "If you want me to do things only for ROI reasons, you should get out of this stock,"ⁱⁱⁱ he thundered. In September 2014, Cook said that he did not believe that there was a tradeoff between the economy and the environment. "If you innovate and you set the bar high, you will find a way to do both. You must do both."^{iv}

THE CONTROVERSY REGARDING CONFLICT MINERALS

Conflict minerals referred to natural resources that were mined in places impacted by conflicts and sold for funding armed groups. The referred conflict minerals most commonly referred to were coltan (tantalum), cassiterite (tin), wolframite (tungsten)⁴, and gold.^v These minerals were used in making parts used in cell phones, tablets, laptops, aircraft, and medical equipment. In Congo, the Tutsi⁵ tribe led M23 rebels were fighting the government forces for the control of resource-rich eastern Congo and they used the revenues from the sales of conflict minerals to fund their operations.^{vi} Government troops and armed groups in conflict prone areas fought with each other for control of the mines and smuggling routes. Funding received through the sale of conflict minerals could result in prolonging the conflict in troubled areas, leading to the killing and suffering of innocent people living there. Past evidence proved that armed groups in conflict prone areas made hundreds of millions of dollars by mining and selling conflict minerals. Conflict minerals were smuggled from the troubled areas through neighboring countries and transported to smelters around the world. It was very difficult to find the exact origins of minerals which were smuggled out of mines as many smelters did not reveal the source from which they received these minerals.

Other than the suffering caused by the wars that were funded by conflict minerals, the local populations in the areas where they were mined suffered abuse from armed groups. Local people, including children, were often forced to participate in the illegal mining activity. In order to intimidate people who refused to participate in the mining activity, armed groups often murdered children and raped women. Workers in the illegal mines were not provided with any advanced tools to extract minerals from the ground. Lifting of minerals from the earth and loading them on to vehicles was also done manually. The lack of any protective gear to the miners exposed them to harmful chemicals and gases which often caused serious health problems or even death. The share of conflict minerals in the revenues of Congo's armed groups was almost 75 percent and was used for buying guns and weapons.^{vii}

The issue of regulating conflict mineral first emerged during the late 1990s in the UN General Assembly. Countries around the world started putting regulations in place on the use of conflict minerals. In USA, Senator Sam Brownback proposed the Congo Conflict Minerals Act of 2009 that required companies to disclose the sources of conflict minerals used in making their products. The legislation did not become a law as it could not be passed in the United States Congress.^{viii} Later in the year 2010, Sam Brownback introduced provisions similar to that of the Congo Conflict Minerals Act of 2009 in the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act). The act was successfully passed in the United States Congress and became effective in the year 2010.^{ix} Section 1502 of the Dodd-Frank Act made it mandatory for all the publicly traded companies in USA to ensure that the raw materials used to make their products were not linked to conflicts in Congo through an audit

⁴ Coltan, cassiterite, and wolframite are metallic ores from which metals like tantalum, tin, and tungsten are extracted.

⁵ Tutsi is an ethnic group that inhabits the African Great Lakes region.

of its supply chains. In August 2012, the US Securities and Exchange Commission⁶ (SEC) issued its Conflict Minerals Rule and set of guidelines regarding the use of minerals sourced from Congo. The first reports to SEC were to be filed by the US companies on June 2, 2014.

The regulation did not go down well with everyone. For instance, in a letter to the SEC, representatives from the Congo mining cooperatives wrote: *“Do we now have to choose between dying by a bullet or starving to death? ... We are supporting you very well in what you want to achieve, and thank you for all your effort, but if we cannot start to work...we will starve.”*^x

APPLE AND CONFLICT MINERALS

Being one of the major consumers of conflict minerals, the electronics industry was facing increased criticism from human rights organizations regarding their use in its products. The stupendous sales growth experienced by Apple's products since the launch of the iPhone in 2007 made it rely on manufacturers in Asia like Foxconn Technology Group⁷ (Foxconn) for manufacturing its products (See *Exhibit III for Product Wise Sales of Apple*). These contract manufacturers did not verify the sources from which they procured minerals properly. As a result, companies like Apple and Intel Corporation⁸ (Intel) faced criticism from activists that conflict minerals leading to death and destruction in African countries were being used in their products. By the year 2010, when Apple had grown to be one of the biggest electronics companies in the world, it started facing protests from activist groups.

Apple marketed many popular products such as the iPhone, the iPad, Mac, the iPod, Apple TV, displays, and accessories. The company manufactured these products, or contracted them to be manufactured in China. Apple had put in place a 'Supplier Code of Conduct' and, according to the company, its efforts in this area *“span the entire supply chain – from the manufacturers of tiny components to the facilities that assemble our final products”*^{xi} (See *Exhibit IV for Excerpts from Apple's Supplier Code of Conduct*). These products contained minerals like gold, columbite-tantalite (coltan), cassiterite, wolframite, tantalum, tin, and tungsten.^{xii} According to the company, due to the lengthy nature of its supply chain and the nature of the refining process for minerals, it was very difficult for Apple to track and trace the minerals that went into its products. According to Apple, its supply chain ran through *“family-run mines, brokers, smelters, refiners, and commodity exchanges – before reaching a component or subcomponent manufacturer”*.^{xiii}

In June 2010, activists groups like Enough Project⁹ and Campus Progress¹⁰ staged a massive protest against Apple during the opening ceremony of Apple's first store in Washington, DC at Georgetown. Carrying banners reading 'Guarantee Free', the activists demanded that Apple stop using conflict minerals in its products (See *Exhibit V for images of protests*). The organizers said that the objective of staging the protest was to make Apple's consumers aware of the fact that its expensive products used minerals from the conflict torn places in Africa.^{xiv} Even though many other companies used conflict minerals in its products, the activists made Apple their first target due to its sheer size. They believed that with its vast resources, Apple

⁶ The U.S. Securities Exchange Commission, headquartered in Washington, D.C., USA, is an independent agency of the United States federal government responsible for the enforcement of federal securities laws.

⁷ Foxconn Technology Group, headquartered in New Taipei, Taiwan, is the trading name of Hon Hai Precision Industry Co. Ltd. It is one of the leading electronics contract manufacturing companies in the world for companies like Apple.

⁸ Intel Corporation, headquartered in Santa Clara, California, USA, is a leading semiconductor chip manufacturer in the world.

⁹ Enough Project, headquartered in Washington D.C., USA, is a leading non-profit organization that works for the protection of human rights around the world.

¹⁰ Campus Progress, headquartered in Washington D.C., is a non-profit organization that promotes progressive political and social policy.

could quickly put an end to the use of conflict minerals in its products and thereby set an example to other companies around the world. A lawyer and activist called Delly Mawazo Sesete (Sesete) from Congo started a campaign on the global petition site Change.org¹¹ protesting against Apple's use of conflict minerals in its products. The campaign was highly successful and received support from 50,000 people from 75 countries around the world. Commenting on the role that Apple could play in reducing the suffering of people in Congo, Sesete said, *"Apple is perfectly positioned to be the first company to create a Congo conflict free phone, using minerals from Congo that further stability and economic development and don't use slave labor or fund mass atrocities."*^{xv}

Worried that the continued protests against the use of conflict minerals in its products might result in a loss of brand image, Apple initiated steps to curb the use of such minerals. It joined hands with other corporate pioneers like Intel to come out with measures to make the minerals used in its products conflict free. Apple became one of the first companies in the world to investigate the use of conflict minerals in its products and to map its supply chain to the smelter and refinery level.^{xvi} Mapping its supply chain helped the company to identify the potential entry points for conflict minerals into its supply chain.

In the year 2010, Apple became the first company to publicly announce the number of smelters in its supply chain.^{xvii} In order to understand the sources of conflict minerals used in its complicated and multi-tiered supply chain, it organized an extensive survey program. Nearly 400 of its suppliers were surveyed by the year 2013. In order to verify the claims made by the suppliers during the survey,^{xviii} Apple organized in-person visits and utilized the services of third-party investigators. Later, it also mandated that its suppliers only use audited and conflict-free smelters when enough of them were available to fulfill their requirement. As many of the smelters and refiners in Congo could not comply with its requirement of getting certified as conflict free, Apple started providing them with proper support in analyzing their sources of mineral ores and in getting themselves certified by independent third party auditors.

Apple started a unique smelter training program to train and consult the management and staff of smelters in its supply chain to emerge conflict free. Apple's smelter training program was started in association with some other member companies of Conflict free Sourcing Initiative¹² (CFSI). Apple conducted onsite training aimed at improving the skills of people running the smelters. Apple's efforts to increase supplier responsibility gained momentum in the year 2012 under the leadership of its new CEO, Tim Cook.^{xix} By the year 2012, 34 smelters in Apple's supply chain had received training and consultation on getting themselves certified conflict free.^{xx} In the year 2012, Apple's efforts earned it praise from Enough Project, which described it as one of the four companies leading the struggle against conflict minerals (the others being Intel, Motorola, and HP).^{xxi}

For the year 2012, Apple was ranked among the top ten companies in the 2012 Conflict Minerals Company Rankings given by Enough Project (*See Exhibit VI for 2012 Conflict Minerals Company Rankings by Enough Project*).^{xxii} The efforts of Apple and other technology companies in limiting their use of conflict minerals started yielding positive results and reduced the revenues of armed groups in Africa. By 2012, the revenues of armed groups from the sale of three conflict minerals, viz. tin, tantalum, and tungsten had fallen by 65 percent when compared to 2010. The most significant fall in the revenues for the armed groups was in the trade of tin that used to earn them a revenue of US\$ 115 million per year in revenues.^{xxiii} According to analysts, the action taken by the technology companies was the main reason for the fall in the revenues of the armed groups. Before the action taken by

¹¹ Change.org is the leading online petition platform in the world. It has 70 million users across 196 countries in the world.

¹² Conflict Free Sourcing Initiative is a non-government organization founded by the members of Electronic Industry Citizenship Coalition and Global e-Sustainability Initiative in the year 2008. It focuses on addressing the concerns regarding the use of conflict minerals in their products.

corporations, independent monitoring of mines and trading routes by governments and international organizations could not be done effectively in conflict prone Africa.

CONTINUING THE EFFORTS

In the year 2014, Apple continued with its efforts to make its products free of conflict minerals. The Apple Supplier Code of Conduct for 2014 released on January 1, 2014, mandated that all its suppliers exercise due diligence in sourcing minerals in accordance with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas¹³. According to the Supplier Code of Conduct, Apple put the onus on the suppliers to check whether the minerals sourced from Congo and its adjoining countries¹⁴ had directly or indirectly financed armed groups that abused human rights.^{xxiv} In the eighth annual Supplier Responsibility Report released in February 2014, Apple claimed that its entire supply of tantalum, which was extensively used in the production of capacitors used in its products, had been verified as conflict free.

In its efforts to not use any conflict minerals in the production of its products, Apple did not just limit its procurement to a few smelters that had been verified as conflict free. Instead, it started pushing more smelters and refiners to get certified as conflict free by complying with the Conflict free Smelter Program¹⁵ or any other independent third-party audit programs. Apple believed that having been one of the biggest users of conflict minerals in the world, it was in a privileged position to improve human rights record in countries like Congo where conflict minerals were mined. Commenting on the initiative, Jeff Williams (Williams), Apple's senior vice-president of Operations, said, *"The fastest way for Apple to become conflict free would be to channel our demand through a couple of verified smelters. But quite honestly, if we did that, we could wave our conflict free flag but it would do nothing to affect the workers on the ground. And so what we are focused on is getting a critical mass of suppliers verified such that we can truly influence the demand situation and change things."*^{xxv}

According to Williams, *"We're pushing hard on the other minerals – tin, tungsten, and gold – to make sure that we have a critical mass of smelters so we can really change the situation on the ground in the DRC."*^{xxvi} He added, *"We think it has the chance to make a difference. The smelters are a choke point where all this flows through. If we can get as many smelters verified [as possible] through this pressure, then we have a real chance of influencing the various activities on the ground."*^{xxvii}

In order to push more smelters and refiners to get themselves certified as conflict free, Apple started publishing the names of smelters and refiners from which conflict minerals were procured, the countries in which they were located, and their CFSP participation status. Through this name-and-shame initiative, Apple hoped that it could get more and more of its suppliers to improve their record.

In May 2014, Apple released a conflict minerals report for the first time in its history. The report was released ahead of the June 2, 2014 deadline set by US government for US companies to disclose whether they had sourced materials from Congo and its neighboring areas.^{xxviii} The report had complete details of the places from which Apple got the key materials used in making its products like smartphones, tablets, and computers. According to the report, out of the 205 smelters and refiners from which minerals were procured and used

¹³ The OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas is a collaborative multi-stakeholder initiative that gives recommendations to the companies on the ethical procurement of minerals from conflict prone areas.

¹⁴ Countries that adjoin the Democratic Republic of Congo are Angola, Burundi, Central African Republic, Rwanda, South Sudan, Tanzania, Uganda, and Zambia.

¹⁵ Conflict free Smelter Program was the flagship program of Conflict free Sourcing Initiative that offers an independent third-party audit to companies and suppliers to validate them as conflict free.

in Apple's products, 21 were identified to be from Congo and its adjoining countries. Of these 21 smelters and refiners, 17 were found to be certified by CFSP as conflict free. The four remaining smelters and refineries had not got their operations audited by a third-party. Apple commissioned a third-party review of their publicly available information and confirmed that there was no evidence of their funding the armed groups in the conflict torn areas of Africa.^{xxix} Apple claimed that it was putting pressure on these four unaudited smelters and refiners to get certified as conflict free or face the risk of being removed from Apple's supply chain.

According to the conflict minerals report released by Apple, it was following a three-pronged strategy to remove conflict minerals from its supply chain. The three-pronged initiatives were: continuing to drive suppliers to get conflict free designation to their smelters and refineries, exerting direct pressure on smelters and refineries to get conflict free designation or be removed from the company's supply chain, and putting pressure on its suppliers to get complete and accurate information from their smelters and refiners regarding their operations.^{xxx}

CHALLENGES OUTSIDE AFRICA

Apple did not limit its ethical sourcing of minerals to Africa. A significant part of some of the key minerals like tin that were used in its products was sourced from places outside Africa like the Bangka and Belitung Islands in Indonesia. Any company that needed tin in its products had to invariably source it from Indonesia as Indonesia was the second largest producer of tin in the world.^{xxxi} Nearly 90 percent of Indonesia's tin was produced in the Bangka and Belitung Islands.

An investigation conducted by *Businessweek*¹⁶ in 2012 found that tin produced in Indonesia was supplied by Indonesian mining companies like PT Timah (Persero) Tbk¹⁷ (PT Timah) to solder makers Chernan Metal Industrial Corp.¹⁸ and Shenmao Technology Inc.¹⁹ which in turn supplied to Foxconn.^{xxxii} As Foxconn made a significant percentage of Apple's products like iPhones and iPods, Apple along with other companies like Samsung Electronics²⁰ (Electronics) were named in the report as causing damage to Indonesia's environment and the health of miners. As per the report, on an average one miner was killed in the tin mines of the Bangka and Belitung Islands every week. Immediately after the publication of the report by *Businessweek*, a non-governmental organization called Friends of the Earth²¹ launched a campaign to force companies like Apple to accept responsibility for the damage caused due to tin mining in Indonesia.^{xxxiii}

Responding to the allegations, Apple's executives immediately visited Indonesia and investigated the tin mining activity there. Identifying the real source of tin and taking corrective steps to make mining safe proved to be difficult for Apple as most of the mining in Indonesia was handled by small mine operators who in turn supplied to big mining companies like PT Timah. Many of the small private miners were also alleged to be operating illegally without any approval from the Indonesian government.^{xxxiv} In order to find a solution

¹⁶ *Businessweek*, headquartered in New York City, USA, is a leading weekly business magazine in the world.

¹⁷ PT Timah (Persero) Tbk, headquartered in Bangka, Indonesia, is one of the leading producers of tin in the world.

¹⁸ Chernan Metal Industrial Corp., headquartered in Taiwan, is a leading manufacturer of tin and soldering products.

¹⁹ Shenmao Technology Inc., headquartered in Taiwan, is a leading manufacturer of solder paste in the world.

²⁰ Samsung Electronics, headquartered in Suwon, South Korea, is a leading major of consumer electronics and electronic components.

²¹ Friends of the Earth, headquartered in London, UK, campaigns for finding solutions to environmental problems around the world.

to the problem, Apple entered into a dialogue with local government officials, NGOs, and smelters. After properly estimating the gravity of the problem, Apple worked with Electronic Industry Citizenship Coalition²² (EICC) and IDH Sustainable Trade Initiative²³ to promote the Indonesian Tin Working Group (ITWG). Its goal in doing so was to solve the environmental and social challenges resulting from tin mining in the Bangka and Belitung Islands. The objective of ITWG was to provide support to the Indonesian government, civil society groups, and businesses to better regulate the tin production in Indonesia and mitigate its negative social and environmental impacts.^{xxxv} ITWG initiated a number of measures to reward local companies for practicing sustainable mining practices.

LOOKING AHEAD

Apple had already spent considerable time and millions of dollars investigating its supply chains to figure out which components might contain gold, tin, tungsten, and tantalum from operations blamed for funding armed militia groups. In the long run, Apple aimed to get all the smelters in the world from which it procured its minerals certified as conflict free. By August 2014, 93 smelters from which Apple procured its minerals were certified by CFSP (*See Exhibit VII for the CFSP certified smelters sourced by Apple*). Another 46 smelters had agreed to participate in the CFSP audit in the future.^{xxxvi} Apple entered into partnerships with a number of government and non-governmental organizations to properly regulate the use of conflict minerals in its products (*See Exhibit VIII for the list of Apple's Key Partners and Stakeholders of Apple*). Despite the steps taken by Apple in regulating the use of conflict minerals in its products, some activists alleged that Apple had been too slow in responding to the crisis. It was observed that the company had not made it through screens to be included in the Dow Jones Sustainability Index or other such funds. Critics opined that Apple should have taken steps early to control the damage to people and the environment. Commenting on the delay in acknowledging the damage caused by tin mining in Indonesia, Julian Kirby, Resource Use Campaigner at Friends of the Earth, said, *"After more than a year-and-a-half of saying 'no comment', it's great that Apple has publicly admitted it uses tin from Indonesia's Bangka province, where it's mined at devastating cost to people and the environment."*^{xxxvii}

According to some industry experts, Apple had to be more vigilant about the sources of minerals used in its products. Apple's strict compliance norms made suppliers, which were not certified as conflict free, look for alternatives in Asian countries like China where there was a high demand for conflict minerals. According to analysts, Apple had to keep monitoring its suppliers strictly so that conflict minerals did not slip into its supply chain through indirect routes.

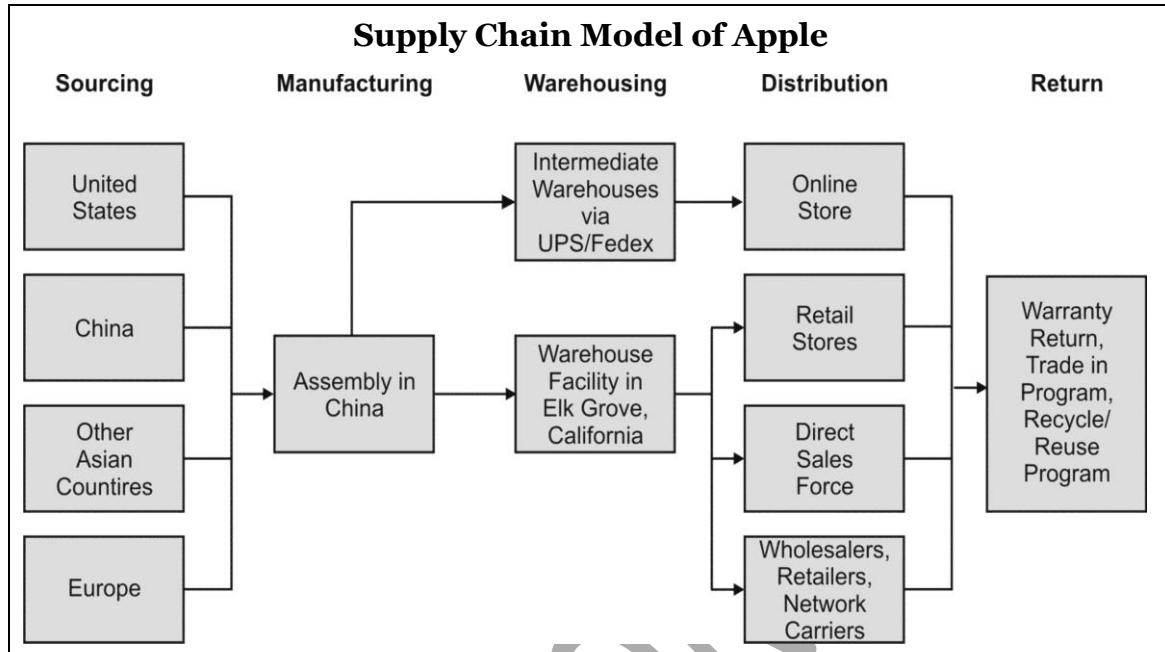
The challenge before Apple was not a simple one as the supply chain was so opaque. For instance, in late 2014, even the US government's Commerce Department had acknowledged that it was facing huge problems in determining which refiners and smelters around the world were financially fueling violence in the war-torn Congo region. According to Tom Quaadman, vice president of the U.S. Chamber of Commerce's Center for Capital Markets Competitiveness, *"The Commerce Department is trying to bring clarity to the rule, but as with everything else on this issue, only sows more confusion and deprives businesses of certainty. At the end of the day, the conflict minerals rule creates the worst outcome – it has not helped lessen the conflicts in the Congo and creates economic harm in the US."*^{xxxviii} US regulations regarding the sourcing of conflict minerals from Congo and its surrounding areas also started to have a negative impact on the situation of people there. Smaller technology companies that did not have the resources to continuously track their supply chains had

²² Electronic Industry Citizenship Coalition, headquartered in Alexandria, Virginia, USA, is a non-governmental organization that works for supporting the rights and wellbeing of workers and communities impacted by the supply chains of leading electronic companies in the world.

²³ IDH Sustainable Trade Initiative is a non-governmental organization that works for the promotion of sustainable trade practices.

started procuring minerals required by them from places other than the Congo region. Falling revenues from mineral mining had also resulted in an increase of poverty levels of people living in those regions.

Exhibit I



Adapted from <http://www.supplychainopz.com/2013/01/is-apple-supply-chain-really-no-1-case.html>.

Exhibit II

Selected Financials of Apple

(Currency in Millions of US Dollars)

Item	2011	2012	2013	2014
Revenues	108,249	156,508	170,910	182,795
Cost of goods sold	64,431	87,846	106,606	112,258
Gross profit	43,818	68,662	64,304	70,537
Selling general & admin expenses	7,599	10,040	10,830	11,993
R&D expenses	2,429	3,381	4,475	6,041
Other operating expenses, total	10,028	13,421	15,305	18,034
Operating Income	33,790	55,241	48,999	52,503
Net Interest Expense	519	1,088	1,480	1,411
Income tax expense	8,283	14,030	13,118	13,973
Net Income	25,992	41,733	37,037	39,510

Source: <http://investing.businessweek.com/research/stocks/financials/financials.asp?ticker=AAPL>.

Exhibit III
Product Wise Sales of Apple

(Units in Thousands)

Product	2014	2013	2012	2011	2010
iPhone	169,219	150,257	125,046	72,293	39,989
iPad	67,977	71,033	58,310	32,394	7,458
Mac	18,906	16,341	18,158	16,735	13,662
iPod	14,377	26,379	35,165	42,620	50,312

Source: <http://files.shareholder.com/downloads/AAPL/3587838712xoxS1193125-13-416534/320193/filing.pdf>.

Exhibit IV
Excerpts from Apple's Supplier Code of Conduct

Labor and Human Rights	
Antidiscrimination	Suppliers should not discriminate against any worker on the basis of their age, disability, marital status, national origin, race, religion, etc.
Anti-Harassment and Abuse	Suppliers should commit to a workplace free of harassment and abuse.
Prevention of Involuntary labor	Suppliers should ensure that trafficked persons are not employed and ensure that all work is voluntary.
Prevention of Underage Labor	Suppliers should employ only workers who are at least 15 years of age or the applicable minimum legal age.
Juvenile Worker Protections	Suppliers may employ juveniles who are older than the applicable legal minimum age but are younger than 18 years of age if their work does not jeopardize their safety, health, and morals consistent with ILO Minimum Age Convention No. 138.
Student Worker Protections	Suppliers should ensure proper management of student workers.
Working Hours	Workweek should be restricted to 60 hours, and workers should be allowed to take one day off every seven days.
Wages and Benefits	Suppliers should ensure that all workers receive at least the legally mandated minimum wages and benefits.
Freedom of Association and Collective Bargaining	Suppliers should ensure that their workers can associate with others, join (or form) organizations of their choice, and bargain collectively.
Health and Safety	
Occupational Health, Safety, and Hazard Prevention	Suppliers should identify, evaluate, and manage occupational health and safety hazards.
Contd...	

<i>Contd...</i>	
Emergency Prevention, Preparedness, and Response	Suppliers should identify and assess potential emergency situations. They should also prepare emergency plans and response procedures that minimize harm.
Incident Management	Suppliers shall have a system for workers to report health and safety incidents and near-misses.
Ergonomics	Suppliers shall identify, evaluate, and control worker exposure to tasks that pose ergonomic risk.
Working and Living Conditions	Suppliers shall provide workers that improve their working and living conditions like clean toilet facilities, portable water, clean storage facilities, etc.
Health and Safety Communication	Suppliers should provide their workers with appropriate workplace safety and training in their primary language.
Worker Health and Safety Committees	Suppliers should initiate and support worker health and safety committees to enhance health and safety education.
Environment	
Hazardous and Non-Hazardous Waste Management	Suppliers should implement a systematic approach to identify, manage, reduce, and dispose of or recycle hazardous substances.
Wastewater Management	Suppliers should implement a systematic approach to identify, control, and reduce wastewater produced by its operations.
Stormwater Management	Suppliers should implement a systematic approach to prevent contamination of stormwater runoff. They should prevent illegal discharges and spills from entering storm drains.
Air Emissions Management	Suppliers should identify, manage, reduce, and responsibly control air emissions emanating from its operations.
Boundary Noise	Suppliers should identify, control, monitor, and reduce noise generated by facilities that affects boundary noise levels.
Environmental Permits and Reporting	Suppliers should obtain, keep current, and comply with all required environmental permits.
Pollution Prevention and Resource Reduction	Suppliers should reduce energy, water, and natural resource consumption by implementing conservation and substitution measures.
Ethics	
Business Integrity	Suppliers should not engage in corruption, extortion, embezzlement, or bribery to obtain an unfair or improper advantage.
Disclosure of Information	Suppliers should accurately record and disclose all the information regarding their business activities to all appropriate parties.
Protection of Intellectual Property	Suppliers should respect intellectual property rights and safeguard customer information.

<i>Contd...</i>	
<i>Contd...</i>	
Whistleblower Protection and Anonymous Complaints	Supplier should protect whistleblower confidentiality and prohibit retaliation.
Community Engagement	Supplier is encouraged to help foster social and economic development and contribute to the sustainability of communities in which it operates.
Responsible Sourcing of Minerals	Suppliers should exercise due diligence while sourcing minerals from the Democratic Republic of Congo and its adjoining countries.
Management Commitment	
Company Statement	Suppliers should develop a company statement affirming their commitment to high standards of social and environmental responsibility, ethical conduct, and continuous improvement.
Management Accountability and Responsibility	Suppliers should identify company representatives responsible for ensuring implementation and periodic review of its management systems.
Documentation and Records	Suppliers should have processes to implement applicable laws and regulations and requirements of Apple's supplier code of conduct. Suppliers should maintain documents and records to ensure regulatory compliance.
Training and Communication	Suppliers should develop and maintain management and worker training programs to facilitate proper implementation of their policies and procedures. Suppliers should have a process for communicating clear and accurate information to all the stakeholders.
Corrective Action Process	Suppliers should have a process for timely correction of any deficiencies or violations identified.

Adapted from Apple Supplier Code of Conduct Version 4.0 Effective Date: January 1, 2014

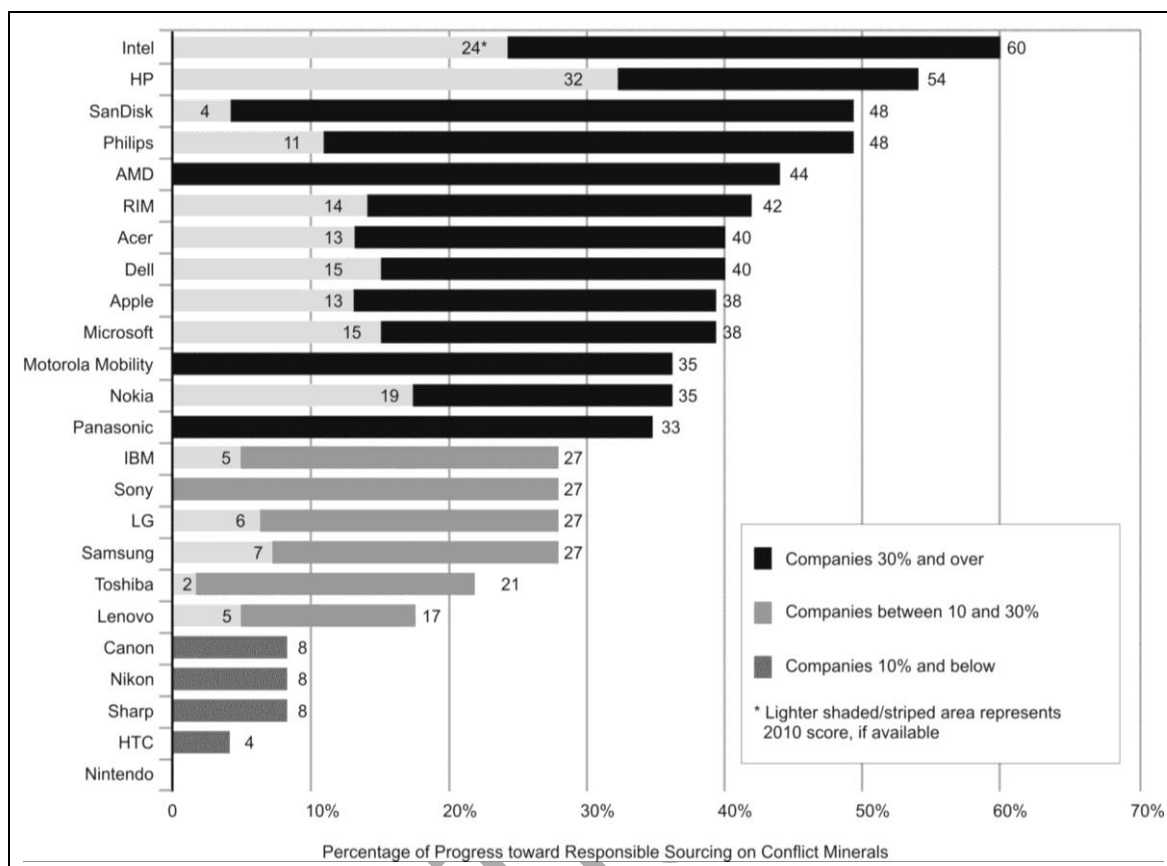
Exhibit V
Protests Outside Apple's Store in 2010



Source: <https://www.flickr.com/photos/enoughproject/sets/72157624332385450>.

Exhibit VI

2012 Conflict Minerals Company Rankings



Adapted from "2012 Conflict Minerals Company Rankings," <http://www.raisehopeforcongo.org>.

Exhibit VII

Total CFSP Certified Smelters Sourced by Apple

Metal	Number of Smelters
Gold	50
Tin	16
Tantalum	23
Tungsten	4

Source: "Quarterly Smelter List," <http://www.apple.com>, August 2014.

Exhibit VIII
Key Partners and Stakeholders of Apple

Sl. No.	Name of Partner/Stakeholder
1	Conflict free Sourcing Initiative (CFSI)
2	Conflict free Tin Initiative (CFTI)
3	Electronics Industry Citizenship Coalition (EICC)
4	Enough Project
5	IDH Sustainable Trade Initiative's Indonesian Tin Working Group
6	ITRI
7	KEMET's Partnership for Social and Economic Sustainability
8	London Bullion Market Association (LBMA)
9	Partnership Africa Canada (PAC)
10	Public-Private Alliance (PPA)
11	Responsible Jewellery Council (RJC)
12	Tungsten Industry-Conflict Minerals Council (TI-CMC)

Source: "Supplier Responsibility 2014 Progress Report," https://www.apple.com/supplier-responsibility/pdf/Apple_SR_2014_Progress_Report.pdf.

End Notes

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