

Evaluation

VERIFIN Training Programme on Verification of Chemical Weapons



Evaluation report 2011:3

MINISTRY FOR FOREIGN AFFAIRS OF FINLAND

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Tuija Stenbäck
Birgit Aurela
Marja Tuominen

Evaluation report 2011:3

MINISTRY FOR FOREIGN AFFAIRS OF FINLAND

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PREFACE

Training in chemical weapons verification, offered by the VERIFIN institute of the University of Helsinki, demonstrates well how development policy and cooperation serve in the fulfilment of political objectives. The VERIFIN training has been offered since 1994, it being a continuation to the earlier research project on this topic which started in 1973.

The VERIFIN training on chemical weapons verification has been evaluated once before, in 2002. The purpose of the current evaluation, launched in the autumn 2010, was to offer an external independent view on the status of the training programme at a juncture where another three-year programme had been planned. Because of the long duration of the training programme, it was imperative to look at the wider impacts at the level of the former trainees and their host institutions and countries. The evaluation included a field mission phase, which covered a total of six countries, two in Africa, two in Latin-America and two in the Asia region. The evaluation focused on the ODA-component of the training programme, acknowledging that there are also other sources of funding to the relevant training.

The results of the evaluation are interesting, in addition to chemical weapons verification issues they address also one of the growing problems in the developing partner countries – the increase of hazardous chemicals in the environment. The evaluation found the given training in the verification of chemical weapons useful and of high quality. However, there are interesting recommendations included on how the skills achieved in the training could be put into wider use to serve also other growing needs in the developing partner countries. There are clear recommendations on how the capacity development of the institutions could be accomplished parallel with the capacity development of individuals.

Helsinki, 12 September 2011

Aira Päivöke
Director
Development Evaluation

ACRONYMS

ACW-REP	Course on the Analysis of Chemicals Related to the Chemical Weapons Convention in the Framework of OPCW proficiency testing
AMDIS	Automated mass spectral Deconvolution and Identification System
APC	Assistance and Protection Course
ASD	Analytical Skills Development (Course)
BACC	Basic Analytical Chemistry Course
CI	Chemical Ionisation
CMC	Crises Management Centre
CV	Curriculum Vitae
CW	Chemical Weapon; Chemical Warfare
CWA	Chemical Warfare Agent
CW-LABEX	International Workshop on the Analysis of Chemicals Related to the Chemical Weapons Convention – Laboratory Exercise
CW-LSE	Laboratory Skills Enhancement for the Analysis of Chemicals Related to the Chemical Weapons Convention
CWC	Chemical Weapons Convention
DAC	Development Assistance Committee
EI	Electron Ionisation
EVA	Evaluation Unit of the MFA
FTIR	Fourier Transform Infrared Spectroscopy
GC	Gas Chromatography
HPLC	High Performance Liquid Chromatography
ICA	International Cooperation and Assistance Division (of the OPCW)
IPS	Independent Problem Solving
LC	Liquid Chromatography
MFA	Ministry for Foreign Affairs of Finland
MS	Mass Spectrometry
MTR	Mid-Term Review
NA	National Authority
NACD	Training Course on National Authority and Chemical Databases
NMR	Nuclear Magnetic Resonance Spectroscopy
ODA	Overseas development assistance
OECD	Organisation for Economic Cooperation and Development
OPCW	Organisation for the Prohibition of Chemical Weapons
PAW	Protein Analysis Workshop
POL	Political Department of the MFA
PVTI	Finnish Defence Forces Technical Research Center
QA/QC	Quality Control and Quality Assurance
ROP	Recommended Operating Procedure
SAB	Scientific Advisory Board (of the OPCW)
SP	Sample preparation

TLC	Thin Layer Chromatography
VERIFIN	Finnish Institute for Verification of the Chemical Weapons Convention
WACW3	Workshop on the Analysis Related to Chemical Weapons

Other acronyms and abbreviations are explained in the context they are used.

Evaluointi kemiallisten Aseiden Tunnistamisen VERIFIN Koulutusohjelmasta

Tuija Stenbäck, Birgit Aurela ja Marja Tuominen

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TIIVISTELMÄ

Evaluoinnin kohteena on kemiallisten aseiden kieltosopimuksen (CWC) toteuttamista kehitysmaissa edistävä koulutusohjelma, jota on toteuttanut Helsingin Yliopiston Kemian laitoksen yhteydessä toimiva yksikkö VERIFIN (Finnish Institute for Verification of the Chemical Weapons Convention). Tämän evaluoinnin tarkoituksena on ajantasaisesti VERIFIN koulutusohjelmaan liittyviä tietoja ja tarjota riippumatonta ja ulkopuolista näkökulmaa koulutusohjelman eri ulottuvuuksista. Tarkasteluun kuuluvat mm. organisatoriset järjestelyt, ohjelmakonsepti, opetussisällöt ja menetelmät sekä niiden merkitys VERIFIN:ille asetettujen tavoitteiden toteuttamisessa eri tasoilla. Evaluaatio perustui dokumenttien arviointiin, UM:n virkamiesten, kemiallisten aseiden kieltosopimuksen sihteeristön (OPCW) ja Suomen Haagin suurlähetystön sekä VERIFIN:in henkilöstön haastatteluihin, koulutuksessa olleille lähetettyyn sähköpostikyselyyn sekä kenttämatkoihin Etiopiaan, Keniaan, Malesiaan, Vietnamiin, Mexicoon ja Panamaan.

Kehitysyhteistyömäärärahoja on käytetty koulutusohjelman toteuttamiseen viimeisten 20 vuoden ajan. Kaikki konvention allekirjoittaneet kehitysmaat ovat olleet kelvollisia hakemaan koulutukseen. Koulutusohjelma on saavuttanut hyviä tuloksia kehittäessään Kansallisten viranomaisten kapasiteettia valmistella vuosittain vaaditut tiedonannot luokitelluista kemikaaleista OPCW:lle. Sen sijaan koulutusohjelman konsepti ja koulutusmalli eivät ole olleet yhteneväisiä Suomen kehityspolitiikan tavoitteitten kanssa.

Evaluaatio suosittelee koulutuskonseptin muuttamista siten, että siirrytään yksilöiden kouluttamisesta instituutioden kapasiteetin kehittämiseen. Tällöin otettaisiin paremmin huomioon kehitysmaiden tarpeet, jotka liittyvät enemmän ympäristökysymyksiin kuin kemiallisten aseiden uhkaan. Koulutuksen tulisi pääsääntöisesti tapahtua kehitysmaissa eikä Suomessa. OPCW:n tulisi rahoittaa se koulutus, joka tähtää suoraan kemiallisten aseiden kieltosopimuksen toteuttamiseen.

Avainsanat: kapasiteetin kehittäminen, koulutus, kemiallisten aseiden kieltosopimus, kehityspolitiikka, kehitysyhteistyömäärärahat

Utvärdering av VERIFIN Utbildningsprogrammet för Verifikation av kemiska Vapen

Tuija Stenbäck, Birgit Aurela och Marja Tuominen

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ABSTRAKT

Denna utvärdering gäller den utbildning som Finlands Verifikationsinstitut för konventionen mot kemiska vapen (VERIFIN) anordnar i syfte att främja konventionen om kemiska vapen, dvs. konventionen om förbud mot utveckling, produktion, innehav och användning av kemiska vapen samt om deras förstöring. Utvärderingens syfte var att ge en extern och oberoende bild av de olika dimensionerna av utbildningsprogrammet, däribland institutionell uppläggning, programkoncept, programmets innehåll och arbetsformer och programmets betydelse för uppfyllelsen av de mål som på olika nivåer uppställts för VERIFIN. Utvärderingen grundar sig på dokumentgranskning, intervjuer med tjänstemän vid Utrikesministeriet, tjänstemän vid Organisationen för förbud mot kemiska vapen (OPCW) och Finlands ambassad i Haag, VERIFINS personal, e-postenkäter till f.d. kursdeltagare och studiebesök till Etiopien, Kenya, Malaysia, Vietnam, Mexiko och Panama.

Under de senaste 20 åren har medel för officiellt utvecklingsbistånd använts för utbildningen och alla utvecklingsländer som undertecknat konventionen har varit berättigade till den. Utbildningen har uppfyllt kraven i konventionen och kapaciteten hos utvecklingsländernas nationella myndigheter har förbättrats, särskilt när det gäller att upprätta deklarerationer om förtecknade kemikalier till OPCW. Kraven gällande biståndsmedel, att användningen anpassas till Finlands utvecklingspolitiska mål, kunde däremot inte urskiljas i konceptet eller formerna för utbildningen.

I utvärderingen rekommenderas att man i konceptet för utbildning som finansieras med biståndsmedel övergår från individuell utbildning i Finland till institutionell kapacitetsutveckling i utvecklingsländerna. Då skulle man också kunna beakta utvecklingsländernas prioriteringar, som är mer relaterade till miljöfrågor än till hotet från kemiska vapen. OPCW-finansiering bör användas för utbildning som direkt stöder genomförandet av konventionen i utvecklingsländerna.

Nyckelord: kapacitetsutveckling, utbildning, konventionen om kemiska vapen, finansiering av utvecklingssamarbete, utvecklingspolitik

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ABSTRACT

The subject of the evaluation is the training given by the Finnish Institute for Verification of the Chemical Weapons Convention (VERIFIN) in promotion of the Chemical Weapons Convention (Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction, CWC). Purpose was to provide an external and independent view on the different dimensions of the training programme, including institutional set-up, programme concept, contents and working modalities of the training programme and its significance in fulfilling the objectives set to VERIFIN at different levels. The evaluation was based on document review, interviews of MFA officials, Organisation for the Prohibition of Chemical Weapons (OPCW) officials and the Embassy of Finland in the Hague, VERIFIN staff, e-mail questionnaires of former trainees and field visits to Ethiopia, Kenya, Malaysia, Vietnam, Mexico and Panama.

ODA funds have been used for the last 20 years in the training and all developing countries that are signatories of the CWC have been eligible. CWC requirements have been met with the training and capacity of the National Authorities in developing countries has been enhanced particularly in preparing the Declarations on the scheduled chemicals to the OPCW. However, the ODA requirements of alignment with the Finnish Development Policy Goals were not visible in the training concept and modalities.

The evaluation recommends that the ODA-funded training should move away from the concept of training individuals in Finland to institutional capacity building implemented in the developing countries. Thus, the priorities of the developing countries that relate more to environmental issues than threat of chemical weapons could be taken into account. OPCW funds should be used for training that directly supports the CWC implementation in the developing countries.

Key words: capacity building, training, chemical weapons convention, development co-operation funds, development policy

YHTEENVETO

Evaluointi tarkastelee kemiallisten aseiden kieltosopimuksen toteuttamista kehitysmuissa edistävää koulutusohjelmaa, jota on toteuttanut Helsingin Yliopiston Kemian laitoksen yhteydessä toimiva yksikkö VERIFIN (Finnish Institute for Verification of the Chemical Weapons Convention). Kyseinen sopimus (Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction, CWC) hyväksyttiin Genevessä 3.9.1992 aseistariisun 47. konferenssin yhteydessä.

Tämän evaluoinnin tarkoituksena on ajantasaistaa VERIFIN koulutusohjelmaan liittyviä tietoja ja tarjota riippumatonta ja ulkopuolista näkökulmaa koulutusohjelman eri ulottuvuuksille. Tarkastelutasoina ovat mm. organisatoriset järjestelyt, ohjelmakonsepti, opetussisällöt ja menetelmät sekä niiden merkitys VERIFIN:ille asetettujen tavoitteiden toteuttamisessa. Evaluaatio toteutettiin marraskuun 2010 ja kesäkuun 2011 välisenä aikana.

Tietojen keruussa käytettiin kirjallisen aineiston analyysia, haastatteluja Suomessa (UM, VERIFIN, Kuopion Kriisinhallintakeskus), ja Haagissa (OPCW ja Suomen Suurlähetystö) sekä meneillään olleiden koulutusohjelmien havainnointia Suomessa. Kenttämatkat tehtiin Etiopiaan, Keniaan, Malesiaan, Vietnamiin, Meksikoon ja Panamaan. Sähköinen kyselylomake lähetettiin kaikille 10-vuoden aikana peruskurssin (Basic Course) osanottajille.

Vahvuudet liittyen koulutuskonseptiin ja kohdentamiseen:

- CWC:n vaatimukset ovat ohjanneet koulutukseen valintoja vaatimukset täyttävälle yksilöille maista, jotka edustavat kaikkia kehitysmaita (OECD DAC luokitus). Tällöin tehokkain tapa on ollut järjestää koulutus Suomessa.
- Koulutusta on annettu kansainvälisissä arvioissa parhaan tuloksen saaneissa laboratorioissa, jossa on korkeatasoinen tekninen ja ammatillinen kapasiteetti, joka on varmistanut koulutuksen korkean tason.
- Pienet opiskelijamäärät ovat taanneet yksilöllisen oppimisympäristön ja tuottaneet hyviä oppimistuloksia.
- Käytännönläheinen opetusmetodi on vahvistanut teoreettista oppimista ja omalta osaltaan edistänyt oppimistuloksia.
- Yhteenvetona voidaan todeta, että koulutus on palvellut CWC:n artiklan XI toimeenpanoa.

Heikkoudet liittyen koulutuskonseptiin ja kohdentamiseen:

- Pelkästään Konvention artikla XI:n vaatimusten toteuttamiseen tähdännyt koulutus on johtanut tarjontaperusteiseen koulutuskonseptiin, jossa korkeatasoisen koulutuslaitoksen valmiudet ovat määrittäneet koulutuksen kohdentamisalueen ja koulutustavan. Koulutus ei ole perustunut eritasoisten kehitysmaiden koulutustarpeiden analyysiin, mikä olisi tuottanut enemmän kysyntään (tarpeeseen) perustuvan koulutuskonseptin ja toteuttamismallin.

- Siitä huolimatta, että koulutus on rahoitettu kehitysyhteistyöhön tarkoitetuista määrärahoista, kehitysyhteistyön tavoitteita ja periaatteita ei ole otettu huomioon riittävästi määritettäessä koulutuskonseptia ja toteuttamismallia. Tämä seikka käy ilmi selkeästi Kehityspoliittisen Osaston Projektiasiakirjassa (12.06.2008), jossa todetaan että UM:n Ohjeita Kehitysyhteistyöohjelman Suunnitteluun, Monitorointiin ja Evaluaatioon ei käytetä tässä interventiossa.

Ulkoasiainministeriön Poliittisen osaston asevalvontayksikkö on ollut vastuussa VERIFIN -koulutusohjelman ohjauksesta ja hallinnoinnista. VERIFIN:in rooli on kahtalainen CWC:n toteuttamisessa: (1) instituutin toiminta Kansallisena viranomaisena Poliittisen osaston puolesta; ja (2) koulutusohjelman järjestäjänä käyttäen kehitysyhteistyömäärärahoja. Johtuen VERIFIN:in ensijaisesta roolista CWC:n toteuttamisen edistäjänä kehityspoliittisia periaatteita ja menettelytapoja ei ole noudatettu koulutusohjelman suunnittelussa, mikä kuitenkin on rahoitettu kehitysyhteistyöhön tarkoitetuista määrärahoista.

VERIFIN on painottanut riittävän akateemisen ja ammatillisen kokemuksen tärkeyttä opiskelijavalinnoissaan. Koulutettavat ovat olleet tasaisesti jakautuneita kahden vähiten kehittyneiden maiden ja kahden keskituloisen kehitysmaiden kategorioiden välillä. Vähiten kehittyneitä maita ei ole priorisoitu opiskelijavalinnossa. Eri maanosat ovat olleet tasaisesti edustettuina. On pyritty myös sukupuolten väliseen tasa-arvoon valinnoissa ja naisten keskimääräinen osuus on noussut noin kolmasosaan viime vuosikymmenellä

Monitorointi tapahtuu keräämällä kurssilaisilta kirjallista palautetta kurssien jälkeen. Palaute näissä lomakkeissa on ollut erittäin positiivista, mikä viittaa kurssien korkeaan tasoon sisältöjen ja metodien osalta. Eritoten käytännön opetusta, korkeatasoisia laboratoriofasiliteetteja ja kouluttajien korkeaa ammattitaitoa on arvostettu. VERIFIN laatii vuosiraportit ja 3-vuotisraportit Poliittiselta osastolta saamiensa ohjeiden mukaisesti.

Ympäristökysymykset ovat sekä läpileikkaavia periaatteita että poliittisia päämääriä VERIFIN:in koulutuksessa. Analyttisen kemian opetuskapasiteetin kehittämiseksi CWC:n toimeenpanoon liittyy läheisesti myös kapasiteetin kehittämiseen ympäristönsuojelussa. Analyttistä kemiaa tarvitaan teollisuudessa käytettävien myrkyllisten kemikaalien hallintaan, teollisuuden ja maatalouden päästöjen analysoimiseen ympäristöstä sekä elintarvikkeiden puhtauden varmistamiseen. Useissa maissa ongelmajätteiden käsittely on olematonta. Kansallisen kapasiteetin kehittämisen tarve oli ilmeinen vierailuissa vähiten kehittyneissä maissa, kuten Etiopiassa, Keniassa ja Vietnamin.

VERIFIN:in laboratoriollla Suomessa on korkeatasoiset laitteet ja tilat. Se on yksi maailman johtavia laboratorioita alallaan ja tekee korkeatasoista tutkimusta kemikaaleista, jotka liittyvät Kemiallisten Aseiden Kieltosopimuksen toimeenpanoon. Kenttämatoilla ilmeni, että korkeatasoista teknologiaa on saatavilla myös kehitysmaissa johtuen OPCW:n laitteiden lahjoitusohjelmasta ja muista lahjoituksista (esim. EU). On-

gelmat, jotka tulivat esiin kehitysmaiden laboratoriovierailuissa liittyivät varaosien, käyttökemikaalien ja huollon heikkoon saatavuuteen vähiten kehittyneissä maissa. Etiopiassa ja Keniassa kalliit laitteet olivat käyttämättömänä näistä syistä johtuen. VERIFIN:in koulutusohjelmassa ei opeteta yksinkertaisia analyysimenetelmiä, mutta kehitysmaat olivat itse kykeneviä niiden käyttöön ja käyttivät niitä silloin, kun erityislaitteet olivat poissa käytöstä. Tästä syystä Suomessa annettavaan koulutukseen ei ole syytä ottaa yksinkertaisten menetelmien opetusta.

Globaalilla tasolla VERIFIN:in koulutus kehitysmailla on yhtenevä Kemiallisten aseiden kieltosopimuksen kanssa. Eritoten NACD kurssi (alkoi 2002) tukee kansallisen CWC lainsäädännön toimeenpanoa kehitysmaissa ja luokitelluista kemikaaleista tehtävien selvitysten tekoa.

VERIFIN:in toiminta Kansallisena viranomaisena Suomessa liittyy läheisesti Suomen Asevalvonta, Aseistariisunta ja Ydinsulkupolitiikan toteuttamiseen. Tutkimus, jolla toisaalta kehitetään uusia menetelmiä kemiallisten aseiden tunnistamiseen ja toisaalta varmistetaan designoidun laboratorion status, on yhteneväistä Suomen turvallisuuspolitiikan tavoitteen kanssa. Selkein yhteneväisyys Suomen kehityspolitiikan ja VERIFIN:in koulutusohjelman kanssa liittyy ympäristöllisen kestävyden turvaamiseen.

Ohjelman relevanssia arvioitiin kahdesta näkökulmasta: (1) CWC:n vaatimukset; ja (2) koulutukseen oikeutettujen kehitysmaiden koulutustarpeet. VERIFIN koulutus on relevanttia suhteessa CWC:n vaatimuksiin, mutta kehitysmaiden koulutustarpeet eivät ole ohjanneet kurssien suunnittelua. Samaa koulutuskonseptia ja -tapaa on käytetty osanottajille, jotka ovat tulleet eri kehitystasoilla olevista maista. Vaikka hyödyllisiä taitoja on opetettu, niiden hyödyntäminen on ollut rajoitettua koulutuksen jälkeen. Ympäristömyrkyt ovat suurempi uhka vähiten kehittyneille maille kuin kemialliset aseet.

VERIFIN on ollut tehokkaasti hallinoitu ohjelma Helsingin Yliopiston kemian laitoksen yhteydessä. Henkilökunta on ammatillisesti korkeatasoista ja kurssien toimeenpano on ollut tehokasta. VERIFIN -instituutti on suunnitellut 3-vuotiset projektisuunnitelmat ja ne on hyväksytty VERIFIN -ohjelman johtokunnassa ja sen jälkeen Ulkoasiainministeriön poliittisella osastolla noudattaen UM:n menettelytapoja. VERIFIN -koulutusmalli on jatkunut 20 vuotta samankaltaisena. Tästä vahvistuu käsitys, että VERIFIN:istä on tullut pysyvä koulutusorganisaatio kemian laitoksen sisälle, ei kehitysyhteistyöprojekti. Koulutuksen korkeat yksikkökustannukset selittyvät perus- (Basic) ja jatko- (Advanced) kurssien alhaisilla osanottajamäärillä (4 opiskelijaa/kurssi/vuosi) ja korkeilla hallintokuluilla, joista valtaosa on ollut tilojen vuokria. Kustannustehokkuutta voitaisiin parantaa siirtämällä kehitysyhteistyörahoitteista koulutusta kehitysmaihin.

VERIFIN -koulutuksen vaikuttavuutta voidaan arvioida myös oppimistulosten perusteella. Oppimistuloksia ei ole arvioitu kokeilla vaan opiskelijat itse ovat arvioineet oppimistaan ja sen hyödyllisyyttä työhönsä. Saadun palautteen perusteella koulutus on ollut korkeatasoista. Haastattelut ja elektroniset kyselylomakkeet vahvistavat johto-

päätöksen. Erityisesti käytännön harjoittelua on arvostettu. Merkittävä osa koulutusvaroista on käytetty tutkimukseen, mitä on perusteltu sillä, että tutkimustuloksia voidaan hyödyntää koulutussisällöissä. Kuitenkaan arviointiryhmä ei havainnut konkreettisia elementtejä Basic ja Advanced -kurssien ohjelmissa tai koulutusmateriaaleissa, jotka olisivat olleet seurausta tutkimuksesta. Tutkimus näyttää hyödyntäneen enemmän OPCW:n lyhytkursseja (kuten Course on the Analysis of Chemicals Related to the Chemical Weapons Convention in the Framework of OPWC proficiency testing, ACW-REP), joiden tarkoituksena on tukea maita, jotka haluavat osallistua pätevyystestiin (proficiency test) ja saavuttaa designoidun laboratorion status po. maassa.

VERIFIN ei ole seurannut koulutuksen pitempikestoista vaikutusta kohdemaissa, koska koulutetut ovat edustaneet suurta määrää maita, eikä yhteyden pitäminen koulutuksen jälkeen ole ollut mahdollista. Kenttäkäyntien, haastattelujen ja sähköpostikyselylomakkeiden avulla pyrittiin selvittämään koulutuksen vaikutuksia pidemmällä aikavälillä. Useimmat vastanneet ilmaisivat hyötyneensä koulutuksesta ja kuvailivat taitoja, joita olivat oppineet kurseilla. Monet olivat myös kouluttaneet työtovereitaan. Haastattelut kenttäkäynneillä paljastivat kuitenkin, että Kansallisilla viranomaisilla ei ollut systemaattista koulutuksen hyödyntämisstrategiaa. Työtovereiden opetus oli ollut sattumanvaraista ja useimmiten *ad hoc* perustaista. Malesian Kansallinen viranomainen oli tässä suhteessa poikkeus. Keskituloisilla kehitysmailla, kuten Malesia ja Indonesia, oli tavoitteena suorittaa pätevyystesti ja saada maahan designoitu laboratorio. Tällöin kapasiteetin kehittäminen selkeästi yhdistyi CWC:n toimeenpanoon. Kumpikaan maa ei ole vielä läpäissyt testiä. Näyttää ilmeiseltä, ettei VERIFIN:in koulutus yksin riitä tämän tavoitteen saavuttamiseen, vaan tarvitaan toinen strategia. Koulutusta tarvittaneen myös näissä maissa maakohtaisena kapasiteetin kehittämisenä kohdistuen laboratorioihin itseensä. OPCW:llä on ohjelma, jolla tähän pyritään.

Selkein positiivinen vaikutus on ollut NACD (Training Course on National Authority and Chemical Databases) -kurssilla, jonka ansiosta maat ovat pystyneet suoriutumaan OPCW:lle tehtävästä pakollisesta raportoinnista (declarations).

Kansallisen tason sitoutuminen kapasiteetin kehittämiseen CWC:n toimeenpanossa ja/tai analyttisen kemian hyödyntäminen ympäristön suojelussa ja teollisessa tuotannossa on edellytys kestäväälle kehitykselle. Kehitysmaissa kestävyttä heikentävät hallitusten riittämätön rahoitus laboratorioille, heikko johtaminen ja hallinto laboratorioissa. Hallitusten vähäinen kapasiteetti ympäristölainsäädännön toimeenpanoon heikentää myös koulutustulosten kestävyttä. Korkeatasoisten laitteiden saatavuus ei näytä olevan ongelma johtuen ulkopuolisista lahjoitusohjelmista. Kestävyttä parantaisi koulutuskonseptin laajentaminen yksilöiden koulutuksesta instituutioiden kapasiteetin kehittämiseen paikan päällä.

OPCW on VERIFIN:in läheisin yhteistyökumppani. VERIFIN:in koulutusohjelman laajeneminen vuonna 2003, jolloin lyhytkurssit otettiin mukaan OPCW:n osittaisella rahoituksella, on tiivistänyt yhteistyötä entisestään. Muiden OPCW:n jäsenmaiden yliopistojen osallistuminen CWC koulutusohjelmaan on ollut vähäistä. Ne ovat olleet

enimmäkeen kertaluonteisia koulutuksia, jolloin pitkäaikaisia kumppanuuksia VERIFIN:in ja näiden instituutioiden välillä ei ole syntynyt. Tutkimuksessa VERIFIN:illä on ollut pitkäaikainen yhteistyösuhde Sveitsissä toimivan Spiez laboratorion kanssa (vuodesta 1989).

Lisäarvo

Merkittävin VERIFIN:in lisäarvo on pitkäaikainen sitoutuminen koulutukseen kehityksmaista tuleville opiskelijoille. VERIFIN on 20 vuoden aikana saanut kokemusta ja asiantuntemusta koulutukseen ja tutkimukseen. OPCW ja jäsenvaltiot ovat oppineet luottamaan koulutuksen jatkuvaan saatavuuteen Suomessa.

Suosituks

OPCW, jäsenvaltiot ja kansalliset viranomaiset sekä koulutetut arvostavat korkealle VERIFIN:in ammatillisen osaamisen. Suomen kehityspolitiikan ja VERIFIN:in yhteyttä tulisi kuitenkin lisätä varsinkin, kun koulutuksessa käytetään kehitysyhteistyömäärärahoja. Evaluoinnin suositukset painottavat CWC:n toimeenpanoon suoraan liittyvän koulutuksen erottamista koulutuksesta, jolla on laajemmat kehityspäämäärät. Kehitysyhteistyömäärärahoja tulisi edelleen voida käyttää VERIFIN:in koulutukseen:

1. Koulutus jaetaan kahteen kategoriaan; (i) CWC toimeenpanokoulutus; ja (ii) kehitysyhteistyökoulutus. Koulutusta, joka tähtää CWC:n toimeenpanoon suoraan ei tulisi rahoittaa kehitysyhteistyömäärärahoista. Tällaisia ovat koulutus ja tutkimus, joilla tuetaan jäsenvaltioita saavuttamaan designoidun laboratorion status. Tämä toiminta tulisi rahoittaa OPCW:n toimesta. Kehitysyhteistyömäärärahoista tulisi rahoittaa analyyttisen kemian kapasiteetin kehittämistä valituissa kehityksmaissa. Näin kehityspolitiikan tavoitteet määrittäisivät koulutuksen tavoitteet ja käytettävän koulutusmallin.
2. Tutkimusta tulisi rahoittaa Poliittisen osaston rahoituksella, koska tutkimuksen päätarkoituksena on ylläpitää VERIFIN:in designoidun laboratorion status ja säilyttää korkein mahdollinen kansainvälinen arvosana (ranking). Tutkimus, joka tähtää sofistikoitujen menetelmien kehittämiseen kemiallisten aseiden analyysissä ja uusien kemiallisten aseiden identifoinnissa, ei ole kehityksmaiden prioriteettien mukaista toimintaa.
3. Tulisi suunnitella kehitysyhteistyöhanke, joka tähtää kapasiteetin kehittämiseen analyyttisessä kemiassa valituissa kehityksmaissa käyttäen kehitysyhteistyömäärärahoja. Kustannustehokkuuden ja relevanssin lisääminen edellyttää kohdemaiden priorisointia kahteen vähiten kehittyneiden maiden ryhmään. Ainoastaan poikkeustapauksessa, mikäli siihen on painavat syyt, voidaan ottaa mukaan maa keski-tuloisten kehityksmaiden ryhmästä (esim. mahdollisuus kouluttaa muita alueen maita). Basic ja Advanced -kursien rahoitus tulisi siirtää kehityksmaissa tapahtuvaan laboratorioden kehittämiseen.
4. Täydentävien apumodaliteettien identifiointi: Perusolettamuksena on, että kehitysyhteistyömääräraha pysyy samansuuruisena kuin VERIFIN koulutuksessa. Tällöin muita täydentäviä rahoituslähteitä tulisi identifoida täydentämään suunnitteilla olevaa projektia.

5. Olemassa olevien alueellisten analyttisen kemian verkostojen identifiointi, joille VERIFIN voisi antaa ammatillista tukea ja edistää kestävyttä.
6. Kehityspoliittisen ja Poliittisen osaston välisen dialogin vahvistaminen kehitysyhteistyömäärärahojen käyttöön ja CWC koulutukseen liittyvissä kysymyksissä.

Opetukset tähän mennessä

VERIFIN kaksoisrooli ja kaksi rahoituslähdettä ovat johtaneet tilanteeseen, jossa yhdenlainen koulutusmalli on yrittänyt samanaikaisesti täyttää kahden tyyppisiä politiikkavaatimuksia (CWC ja kehitysyhteistyö). Todellisuudessa kumpikin vaatimus olisi edellyttänyt erityyppistä lähestymistapaa. Tästä on seurannut se, että kehitysyhteistyön periaatteita ei ole riittävästi huomioitu VERIFIN:in koulutuskonseptissa ja koulutuksen toteutusmallissa.

Tästä on opittu, että VERIFIN:in olisi pitänyt saada enemmän ohjausta Kehityspoliittisen osaston asiantuntijoilta koulutusohjelman suunnittelussa. Tämä olisi erityisesti pitänyt ottaa huomioon 10 vuotta sitten, tilanteessa, jossa Mid-term Reviewn tulokset oli julkistettu.

SAMMANFATTNING

Denna utvärdering gäller den utbildning som Finlands Verifikationsinstitut för konventionen mot kemiska vapen (VERIFIN) anordnar i syfte att främja konventionen om förbud mot utveckling, produktion, innehav och användning av kemiska vapen samt om deras förstöring (konventionen om kemiska vapen, CWC), som antogs den 3 september 1992 vid det 47:e mötet inom nedrustningskonferensen i Genève.

Syftet med denna utvärdering är att uppdatera informationen om VERIFINS utbildning. Utvärderingen ska ge en extern och oberoende bild av de olika dimensionerna av utbildningsprogrammet, däribland institutionell uppläggnings, programkoncept, programmets innehåll och arbetsformer och utbildningens betydelse för uppfyllelsen av de mål som på olika nivåer uppställts för VERIFIN. Utvärderingen genomfördes mellan november 2010 och juni 2011.

Faktaunderlag insamlades genom dokumentgranskning, intervjuer med tjänstemän vid Utrikesministeriet, VERIFINS personal, huvudkontoret för OPCW (Organisationen för förbud mot kemiska vapen), Finlands ambassad i Haag och Krishanteringscentret i Kuopio (CMC). Pågående utbildning observerades i Helsingfors, studiebesök gjordes i Etiopien, Kenya, Malaysia, Vietnam, Mexiko och Panama och en elektronisk enkät skickades till personer som deltagit i institutets grundkurser under de senaste tio åren.

Utbildningskonceptets styrkor och omfattning

- Konventionen om kemiska vapen har varit vägledande för utbildningens fokus genom att institutionsbaserad utbildning i Finland bedömts vara det effektivaste sättet att tillhandahålla utbildning för de utbildningsberättigade länderna.
- Utbildningen ges vid ett laboratorium med högsta betyg bland de utsedda laboratorier i världen; laboratoriets högklassiga tekniska kapacitet (instrument och professionell personal) säkerställer en hög kompetensnivå.
- Ett begränsat antal kursdeltagare säkrar en individuell inlärningsmiljö som med stor sannolikhet resulterar i goda inlärningsresultat.
- Praktiskt inriktad metodik har stärkt den teoretiska utbildningen och bidragit till inlärningsresultaten.
- Utbildningen har kort sagt varit ändamålsenlig för uppfyllelse av kraven enligt artikel 11 i konventionen.

Svagheter

- I och med att utbildningen uppfyllt kraven enligt artikel 11 har utbildningskonceptet blivit utbudsbaserat och medfört att utbildningens omfattning och formerna för utbildningen bestämts av tillgången till högklassiga utbildningslokaler. Det har inte skett någon analys av utbildningsbehoven hos den mångfasetterade gruppen av utvecklingsländer, vilket på sikt skulle ha gjort konceptet och formerna för utbildningen mer efterfrågebaserade.

- Trots att utbildningen finansierats med biståndsmedel ur budgeten för officiellt utvecklingsbistånd har målen och principerna för Finlands utvecklingssamarbete inte styrts planeringen av konceptet och formerna för utbildningen. Detta framgår uttryckligen av utvecklingspolitiska avdelningens projektbeskrivning (12.6.2008), där det konstateras att Utrikesministeriets riktlinjer för planering, uppföljning och utvärdering av program inte tillämpas vid denna insats.

Politiska avdelningens (POL-20) enhet för vapenkontroll, nedrustning och icke-spridning har fungerat som ansvarigt organ för styrning och förvaltning av VERIFIN, som har en dubbelroll inom ramen för konventionen om kemiska vapen: (1) nationell myndighet på uppdrag av den politiska avdelningen och (2) anordnare av ett utbildningsprogram som finansieras genom medel från utvecklingspolitiska avdelningen. På grund av att VERIFIN primära roll är att främja genomförandet av konventionen om kemiska vapen har principer och förfaranden för Finlands utvecklingssamarbete inte tillämpats i planeringen av utbildningsprogrammet, som finansieras med biståndsmedel.

I samband med antagningen till utbildningen har VERIFIN betonat tillräcklig akademisk och yrkesmässig erfarenhet hos de sökande. Man har även fokuserat på jämn könsfördelning, och under det senaste decenniet har i medeltal en tredjedel av deltagarna varit kvinnor. Alla utvecklingsländer som anslutit sig till konventionen om kemiska vapen har varit berättigade till utbildningen. Deltagarna är jämnt fördelade på olika världsdelar. Fördelningen enligt ländernas nationalinkomster är jämn mellan de två lägsta inkomstgrupperna och de två medelinkomstgrupperna utan någon övervikt för de minst utvecklade länderna.

Utbildningen följs upp genom att respons från deltagarna samlas in med en enkät efter varje kurs. Responsen har varit överväldigande positiv, vilket pekar på att utbildningen håller hög kvalitet. Särskilt den praktiska delen av utbildningen, de högklassiga laboratorielokalerna och utbildarnas kompetens är uppskattade. Rapporteringen sker årligen och kvartalsvis i enlighet med riktlinjerna från politiska avdelningen vid Utrikesministeriet.

Miljöfrågorna kan ses som ett genomgående tema, men även som ett specifikt mål i riktlinjerna för VERIFIN utbildning. Utbildningen i analytisk kemi för utveckling av ländernas kapacitet att genomföra konventionen om kemiska vapen har ett nära samband med förbättring av kapaciteten på miljöskyddsområdet. Analytisk kemi behövs för reglering av industriella föroreningar, giftiga kemikalier inom industriproduktion, bekämpningsmedel, föroreningar i vatten och luft och avfallshantering. En relativt tydlig förbättring av den nationella kapaciteten i de minst utvecklade länderna kunde konstateras i samband med studiebesöken i Etiopien, Kenya och Vietnam.

VERIFIN har högklassiga laboratorielokaler i Helsingfors. Laboratoriet hör till de utsedda laboratorierna i världen och bedriver kvalificerad forskning om kemikalier relaterade till genomförandet av konventionen om kemiska vapen. Med utgångspunkt i

resultaten av studiebesöken är det uppenbart att utvecklingsländernas tillgång till högteknologisk utrustning har förbättrats under de senaste fem åren till följd av OPCW:s program för bidrag till utrustning och andra bidragsprogram (t.ex. EU:s). De frågor som kom upp under laboratoriebesöken var relaterade till bristen på reservdelar, förbrukningsmaterial och underhållstjänster i de minst utvecklade länderna. VERIFIN ger inte utbildning i de enklare metoderna inom analytisk kemi, men utvecklingsländerna föreföll ha en relativt god förmåga att använda enklare metoder när deras högteknologiska utrustning inte var i bruk. Det är därför tveksamt om utbildning i enklare metoder behöver ges i Helsingfors.

På global nivå är VERIFIN utbildning i överensstämmelse med genomförandet av konventionen om kemiska vapen i utvecklingsländerna, särskilt NACD-kursen (Training Course on National Authority and Chemical Databases; startad 2002), som stöder länderna i införandet av konventionen om kemiska vapen i den nationella lagstiftningen och arbetet med deklARATIONERNA om klassificerade kemikalier (klass 1, 2 och 3).

I egenskap av nationell myndighet för genomförandet av konventionen om kemiska vapen har VERIFIN en nära koppling till genomförandet av Finlands politik för vapenkontroll, nedrustning och icke-spridning. Forskningen gällande utveckling av kvalificerade metoder för identifiering av nya kemiska stridsmedel och statusen som ett av de utsedda laboratorierna indikerar att verksamheten överensstämmer med och främjar Finlands säkerhetspolitik. Den tydligaste överensstämmelsen mellan Finlands utvecklingspolitik och VERIFIN utbildningsprogram finns i arbetet för att säkra en miljövänlig hållbar utveckling (millenniemål, MDG, 7).

Det finns två utgångspunkter för bedömning av utbildningens relevans: (1) kraven i konventionen om kemiska vapen och (2) utbildningsbehoven hos de utbildningsberättigade mottagarländerna. Enligt bedömningen som baseras på efterlevnaden av konventionen om kemiska vapen har VERIFIN utbildning god relevans. Däremot har utvecklingsländernas utbildningsbehov inte utgjort grunden för utvecklingen av kurserna. Samma koncept och former används för utbildning av deltagare från olika länder oberoende av ländernas ekonomiska utvecklingsnivå. Användbara kunskaper ges och inhämtas, men möjligheterna att utnyttja dem är begränsade i många fall. I de minst utvecklade länderna är miljöfarlighet ett större hot än kemiska vapen.

Verifins program har administrerats effektivt av kemiska institutionen vid Helsingfors universitet. Personalen är mycket professionell och kurserna har planerats och genomförts effektivt. VERIFIN har ansvarat för utarbetandet av projektdokument för perioder på tre år. Dessa godkänns av VERIFIN styrelse och underställs politiska avdelningen vid Utrikesministeriet för slutligt godkännande i enlighet med ministeriets rutiner. Formerna för genomförande av utbildningsprogrammet och programmets innehåll har varit likartat i 20 år, vilket tyder på att VERIFIN har blivit en permanent utbildningsstruktur med säkrad finansiering inom institutionen för kemi. Utbildningens höga enhetskostnader förklaras av det låga antalet deltagare på grundkurserna och de avancerade kurserna (4 per kurs) och de höga administrativa kostnaderna, som

främst beror på höga lokalhyror. Kostnadseffektiviteten kan förbättras genom att utbildning som finansieras med biståndsmedel genomförs i utvecklingsländerna.

Effektiviteten i VERIFIN utbildning kan bedömas genom inlärningsresultaten. Man har inget examenssystem, men kursdeltagarna gör en egen bedömning av sitt lärande och hur användbara kunskaperna är i deras arbete. Respons samlas in efter varje kurs. Utbildningen har varit mycket effektiv om man ser till hur nöjda deltagarna är. Intervjuerna och enkätsvaren förstärker denna iakttagelse. Den praktiskt inriktade metodiken har varit mycket uppskattad av deltagarna. En betydande andel av utbildningens biståndsmedel har använts för forskning i syfte att påverka utbildningens innehåll. Utvärderingsgruppen kunde dock inte identifiera sådana konkreta element i grundkursens eller de avancerade kursernas innehåll eller utbildningsmaterial som skulle vara direkta resultat av forskningen. Forskningen förefaller mer direkt bidragit till OPCW-workshoppar (t.ex. Course on the Analysis of Chemicals Related to the Chemical Weapons Convention in the Framework of OPCW proficiency testing, ACW-REP) för länder som vill uppnå statusen som utsett laboratorium genom deltagande i kvalifikationsprövning.

VERIFIN är inte involverat i uppföljningen av utbildningens effekter i mottagarländerna eftersom deltagarna kommer från ett stort antal länder och möjligheterna att hålla kontakt med dem är begränsade. Syftet med studiebesöken, intervjuerna och e-postenkäterna i samband med utvärderingen var att undersöka utbildningens effekter. De flesta av de svarande berättade att utbildningen hade varit till nytta och beskrev vilka kunskaper de hade fått och sedan använt i sitt arbete och i samband med utbildning av andra personer. Intervjuerna under studiebesöken visade dock att utbildningen som gavs till andra personer inte grundade sig på ett systematiskt tillvägagångssätt från den nationella myndighetens sida utan snarare bestod av sporadiska råd till kollegor. Malaysia hade det mest systematiska tillvägagångssättet för utbildning och kunskapsöverföring till andra. Länder i den rikare medelinkomstgruppen, såsom Malaysia och Indonesien, prioriterar godkänd kvalifikationsprövning för att uppnå status som utsett laboratorium på nationell nivå. Detta kopplar behovet av kapacitetsutveckling till genomförandet av konventionen om kemiska vapen. Den avsedda effekten har dock inte uppnåtts eftersom varken Malaysia eller Indonesien genomfört en godkänd kvalifikationsprövning. Det är uppenbart att VERIFIN utbildning i sig inte är tillräcklig för detta mål. För en framgångsrik kvalifikationsprövning behövs en annan strategi, eventuellt intern kapacitetsutveckling på en bredare bas än kunskap om hur man använder kvalificerad utrustning. OPCW har ett program som stöder laboratorier i deras strävan att uppnå status som utsett laboratorium.

Den tydligaste positiva effekten av utbildningen har varit en förbättring av ländernas kompetens att utarbeta deklARATIONER till OPCW i och med NACD-kursen, som handlar om genomförandet av konventionen om kemiska vapen.

Engagemang på nationell nivå för ökad kapacitet i genomförandet av konventionen om kemiska vapen och/eller användning av analytisk kemi inom miljöskydd och indu-

stripproduktion är en förutsättning för hållbar utveckling. Otillräcklig finansiering av laboratorierna från regeringarnas sida, svag ledning av laboratorierna, dålig kapacitet hos regeringarna för utveckling av miljölagstiftning är faktorer som försvagar utbildningsresultatets hållbarhet. Tillgången till högklassig utrustning förefaller inte längre vara ett stort problem tack vare bidrag från OPCW och andra finansieringskällor. Hållbarheten bör förbättras genom att konceptet för utbildningen breddas från individuell utbildning till institutionell kapacitetsutveckling.

VERIFIN närmaste samarbetspartner är OPCW. Utökningen av VERIFIN utbildningsprogram 2003 med korta workshoppar skedde i och med att programmen delvis finansieras av OPCW. När andra institutioner anordnat utbildning relaterad till konventionen om kemiska vapen har det för det mesta varit fråga om enstaka arrangemang och inga långsiktiga partnerskap har bildats mellan VERIFIN och institutioner från andra medlemsstater. På forskningsområdet har VERIFIN bedrivit långvarigt samarbete, t.ex. sedan 1989 med Spiez-laboratoriet i Schweiz beträffande provberedningsmetoder.

Mervärde

Det starkaste inslaget i mervärdet som VERIFIN skapat är det långsiktiga engagemanget för att tillhandahålla utbildning för de utvecklingsländer som är medlemsstater. Under de 20 åren har VERIFIN skaffat sig erfarenhet och expertis inom utbildnings- och forskningsområdet. OPCW och medlemsstaterna förlitar sig på att de har tillgång till utbildning i Finland.

Rekommendationer

VERIFIN professionella expertis och erfarenhet inom utbildning och forskning är mycket uppskattade av alla samarbetspartner, däribland OPCW, medlemsstater, nationella myndigheter och f.d. kursdeltagare. Anpassning till Finlands utvecklingspolitik är en aspekt som bör betonas mer när biståndsmedel används i samband med utbildningen. I rekommendationerna föreslås att man skiljer på utbildning som har ett direkt samband med konventionen om kemiska vapen och utbildning med vidare utvecklingsmål. Trots detta understryker utvärderingsgruppen behovet av att även i fortsättningen använda biståndsmedel för VERIFIN utbildning:

1. Dela upp utbildningen i två kategorier: (i) stöd till genomförande av konventionen om kemiska vapen och (ii) stöd till utvecklingssamarbete. Utbildning som tydligt syftar till att stärka genomförandet av konventionen om kemiska vapen och utbildning och forskning som syftar till att ge medlemsstater stöd för att uppnå status som utsett laboratorium på nationell nivå bör inte finansieras med biståndsmedel. Dessa aktiviteter bör finansieras genom OPCW. Biståndsmedel bör användas för kapacitetsutveckling inom analytisk kemi i utvalda länder inom gruppen minst utvecklade länder. Då kan utbildningen anpassas till de politiska målen för utvecklingssamarbetet.
2. Finansiera VERIFIN forskning genom politiska avdelningen vid Utrikesministeriet eftersom forskningen syftar till att bevara VERIFIN status som utsett laboratorium med högsta betyg och till utveckling av kvalificerade metoder för an-

- analys av kemiska stridsmedel, t.ex. nya stridsmedel, nya provmatriser eller nya analysmetoder. Dessa är inte prioriterade mål i de minst utvecklade länderna.
3. Planera ett eller flera utvecklingsprojekt för kapacitetsutveckling inom analytisk kemi som finansieras genom biståndsmedel. Kostnadseffektiv förbättring av utbildningens relevans, effekt och anpassning till utvecklingspolitiken kräver prioritering av länderna i **de två minst utvecklade landskategorierna**. Ett projekt bör planeras för 2–3 länder som får stöd i 1–2 år. Medlen som används för finansiering av grundkurser och avancerade kurser bör överföras till projekt som syftar till kapacitetsutveckling inom analytisk kemi vid laboratorier som samarbetar med nationella myndigheter. Genom den förbättrade kapaciteten skulle man även kunna uppfylla kraven enligt konventionen om kemiska vapen.
 4. Använd kompletterande biståndsformer för att skapa synergier eftersom den finansiella ramen antagligen förblir på den nuvarande nivån. Andra finansieringskällor bör därför identifieras för att komplettera projektet.
 5. Ge stöd till befintliga regionala nätverk inom analytisk kemi för vilka VERIFIN skulle kunna tillhandahålla experttjänster och därigenom främja hållbarheten.
 6. Stärk dialogen mellan den utvecklingspolitiska och den politiska avdelningen vid Utrikesministeriet och VERIFIN i alla aspekter som gäller finansiering av utbildning relaterad till konventionen om kemiska vapen med biståndsmedel.

Lärdomar

VERIFIN dubbelroll och dess dubbla finansieringskällor har lett till en situation där man har försökt tillgodose två separata politiska krav genom en och samma utbildningsform trots att olika tillvägagångssätt hade behövts. Därmed har principerna för Finlands utvecklingssamarbete inte följts tillräckligt noggrant i konceptet och formerna för VERIFIN utbildning.

Lärdomarna av detta är att VERIFIN borde ha fått mer vägledning från utvecklingspolitiska avdelningen vid planeringen av utbildningsprogrammet. Vägledningen borde ha varit starkare, särskilt efter den halvtidsutvärdering som utfördes för 10 år sedan. Avdelningen borde ha haft ett bättre internt instrument för dialog och politisk vägledning med avseende på detta projekt.

SUMMARY

The evaluation examines the training given by the Finnish Institute for Verification of the Chemical Weapons Convention (VERIFIN) in support of the Chemical Weapons Convention (Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction, CWC) that was adopted in Geneva on the 3rd of September 1992 by the 47th session of the Conference of Disarmament.

The purpose of this evaluation is to update the information on the VERIFIN training. The evaluation will offer an external and independent view on the different dimensions of the training programme, including institutional set-up, programme concept, contents and working modalities of the training programme and its significance in fulfilling the objectives set to VERIFIN at different levels. The evaluation was undertaken from November 2010 to June 2011.

Data was collected through document review, interviews of Officials of the Ministry for Foreign Affairs of Finland (MFA), VERIFIN staff, Organization for the Prohibition of Chemical Weapons (OPCW) headquarters and Embassy of Finland in the Hague, and Crises Management Centre (CMC) in Kuopio. Ongoing training was observed in Helsinki, field visits to Ethiopia, Kenya, Malaysia, Vietnam, Mexico and Panama and electronic survey of former Basic Course participants during the last ten years were undertaken.

Strengths of the training concept and scope:

- The CWC has guided the focus of the training by defining institution-based training in Finland for selected individuals from the eligible group of countries as the most effective way of delivering training.
- Training has been given in a laboratory that has the best grading as a designated laboratory in the world with high-level technical capacity (instruments and professional staff) securing the high competence level.
- Small intakes of students have secured an individualized learning environment and most likely produced good learning results.
- A hands-on training method has reinforced the theoretical and has contributed to the learning results.
- In short the training has served the purpose of the CWC requirement of the Article XI.

Weaknesses

- Fulfilling the Article XI requirements the training has led to a supply-based training concept where availability of a high-level training facility has determined the training scope and modality. Analysis of the training needs of the highly diversified set of developing countries has not occurred which eventually would have led to a more demand-based training concept and modality.
- Even though the funds for training have been allocated from the ODA funds

from the ODA budget, the goals and principles of development cooperation have not guided the formulation of the training concept and modality. This has been intentionally expressed in the Development Policy Department's Project Description paper (12.06.2008) where it is stated that the MFA Guidelines for Programme Design, Monitoring and Evaluation are not used in this intervention.

The Unit for the Arms Control, Disarmament and Non-Proliferation within the Political Department (POL-20) has been the responsible body for the governance and administration of the VERIFIN which has a dual role in CWC; (1) the National Authority on behalf of the Political Department and (2) organizer of the training programme with the funds from the Department for Development Policy. Due to the primary role of VERIFIN as promoting implementation of the CWC the development cooperation principles and procedures have not been used in planning the training programme funded through the ODA funds.

VERIFIN has emphasized in student selection the sufficient academic and professional experience of the applicants. Equal gender distribution has been targeted and on average one third of trainees have been females during the last decade. All developing countries that are signatories of the CWC have been eligible for the training. Trainees from different continents are equally distributed. The two lowest income countries and the two middle income groups have also had equal representation with not preference for the least developed countries.

Monitoring of the progress is done by collecting feed-back from the trainees after each training course using a questionnaire. Feedback given by the trainees after the courses has been overwhelmingly positive suggesting that the training has been of high quality. Particularly the hands-on training, high-level laboratory facilities and the competence of the trainers are appreciated. Reporting is done on an annual and tri-annual basis based on the guidelines given by the MFA, Political Department.

Environmental issues can be seen as cross-cutting issues, but also as a policy goal in the VERIFIN training. Training in analytical chemistry for the purpose of capacity development in CWC implementation is closely linked to enhancement of capacity in environmental protection. Analytical chemistry is needed in controlling industrial pollution, toxic chemicals in industrial production, pesticides, water and air pollution and waste management. Enhancing the national capacities in the least developed countries was quite apparent during the field missions to Ethiopia, Kenya and Vietnam.

The VERIFIN laboratory in Helsinki has facilities of a high technological level. It is one of the designated laboratories in the world and undertakes sophisticated research in chemicals that relate to implementing the Chemical Weapons Convention. Based on the findings of the field missions it is evident that availability of high technology equipment in developing countries has improved over the last few years due to the OPCW equipment donation programme and other donation programmes (e.g. by EU). The issues that came up during the laboratory visits related to unavailability of spare parts, consumables and maintenance services in the least developed countries

VERIFIN does not teach simpler analytical chemistry methods, but the developing countries seemed quite capable of using simpler methods when their high-tech equipment was not in operation. Hence, it is questionable whether simpler methods need to be trained in Helsinki.

At the global level the VERIFIN training is in compliance with the implementation of the CWC in the developing countries, especially the NACD (Training Course on National Authority and Chemical Databases) course (started in 2002) that supports implementation of national legislation on CWC and making declarations on the classified chemicals (schedule 1, 2 and 3).

VERIFIN as the National Authority of the CWC implementation is closely linked with the implementation of Finland's Arms Control, Disarmament and Non-Proliferation Policy. The research in developing sophisticated methods of identifying new chemical warfare agents and the designated laboratory status are indications of compliance and promotion of Finland's Security Policy. Clearest compatibility with the Finnish development policy and the VERIFIN training programme is with Ensuring environmental sustainability (MDG Goal 7).

There are two entry points to assessment of the relevance of the training: (1) CWC requirements; and (2) training needs of the eligible recipient countries. Relevance of the VERIFIN training judged by adherence to the CWC has been sound. Training needs of the developing countries have not been the basis for course development. The same training concept and modality is used for participants coming from various levels of economic development. Useful skills are taught and learned but in many cases with limited possibility to utilize them. Environmental hazards are bigger threats in the least developed countries than the threat of chemical weapons.

VERIFIN has been an efficiently managed programme in the Department of Chemistry, University of Helsinki. The staff is highly professional and the courses are planned, and implemented efficiently. VERIFIN itself has been responsible for planning the project documents for the 3-year periods. These are approved by the VERIFIN Board of Directors and then submitted to MFA, Political Department for final approval using the MFA procedures. The similar implementation modality and contents of the training programme over the 20 years imply that VERIFIN has become a permanent training structure within the Department of Chemistry with secured funding. High unit costs of the training are explained by the low number of participants in the Basic and Advanced Courses (4/course) and by the high administrative costs mainly due to high rent of space. Cost-efficiency could be enhanced by transferring ODA funded training into developing countries.

Effectiveness of the VERIFIN training can be assessed through the learning results. There is no examination system in VERIFIN training, but the trainees themselves assess their learning and its usefulness in their work. Feedback is collected after each course. As far as the satisfaction of the trainees is concerned the training has been

very effective. The interviews and the responses to the questionnaires reinforce this observation. Hands-on training method has been highly appreciated by the trainees. A considerable share of ODA funds meant for training have been spent on research with the purpose of impacting the contents of training. However, the team could not identify concrete elements in Basic or Advanced Course contents or training materials that had been direct results of the research. The research seems to have contributed more to the OPCW workshops (e.g. Course on the Analysis of Chemicals Related to the Chemical Weapons Convention in the Framework of OPCW proficiency testing, ACW-REP) that are meant for the countries aiming to participate in the proficiency test and achieving the designated laboratory status..

VERIFIN itself is not involved in follow up of the impact of the training in the recipient countries, because the trainees represent a large number of countries and hence, limits the possibility to keep in touch with the trainees. The field missions, interviews and e-mail questionnaires aimed at finding out impact of the training. Most respondents reported having benefitted from the training by describing the skills that they had learned and utilized in their work and having trained others. However, the interviews during the field mission revealed that the training of others was not based on the NA's systematic approach but more on occasional ad hoc advice given to colleagues. Malaysia had the most systematic approach in training or transfer of knowledge and skills to others. Wealthier middle-income countries like Malaysia and Indonesia prioritize passing the proficiency test and attaining the national designated laboratory status. This links the capacity building needs with the CWC implementation. However, the intended impact of passing the proficiency test had not been accomplished in either Malaysia or in Indonesia. It is evident that the VERIFIN training alone is not sufficient for this aim. Another strategy is needed for support to succeed in the proficiency test, perhaps in-country capacity development on a broader basis than just learning to use sophisticated equipment. OPCW has a programme to support the laboratories in attaining the designated laboratory status.

The clearest positive training impact was that the skills of preparing the Declarations to OPCW had improved as a result of the NACD course which relates to CWC implementation.

National level commitment to development of the capacity in CWC implementation and/or utilization of analytical chemistry in environmental protection and industrial production is a prerequisite of sustainable development. Insufficient government funding for the laboratories, weak laboratory management, weak government capacity to endorse the environmental legislation are factors that weaken the sustainability of the training results. Availability of high level equipment does not seem to be a major problem area any more as a result of donations from OPCW and other sources. Sustainability should be enhanced by broadening the training concept from training individuals to institutional capacity building.

OPCW is the closest partner of VERIFIN. Expansion of the VERIFIN training programme in 2003 to include short workshops has taken place because OPCW finances

partially these programmes. CWC related training offered by other institutions has mostly been one-off provisions and no long-term partnerships have been formed between VERIFIN and institutions from other Member States. Research is an area where VERIFIN has had a long-standing cooperation arrangements; e.g. with the Swiss Spiez laboratory since 1989 in the area of sample preparation methods.

Value-added

The most substantial value-added feature of VERIFIN is the long-term commitment to providing training for the Member States in the developing world. Throughout the 20 years VERIFIN has gained experience and expertise in training and research. OPCW and the Member States have learned to rely on the availability of the training in Finland.

Recommendations

VERIFIN's professional expertise and experience in training and research are highly appreciated by all partners, including OPCW, Member States, National Authorities and former trainees. Alignment with the Finnish development policy is an aspect to be emphasized more when ODA funds are used. The recommendations suggest separation of the training directly linked with CWC from the training with broader development aims. Nevertheless the evaluation team emphasizes the need to continue the VERIFIN training using ODA-funds:

1. Divide the training into two categories; (i) support to CWC implementation and (ii) support to development cooperation. Training that clearly aims at strengthening the implementation of the Chemical Weapons Convention, and training and research aiming at supporting the Members States attaining the designated laboratory status should not be funded through the ODA funds. These activities should be funded by the OPCW. ODA funds should be used for capacity building in analytical chemistry in selected least developed countries which would align the training with the development cooperation policy goals.
2. Finance the research through the funds from the Political Department, MFA, since its purpose is for VERIFIN itself to maintain its status as the designated laboratory with the highest ranking; and for development of sophisticated methods related to analyses of CWAs, for example new CWAs, new sample matrices or new analytical methods. These are not the priorities of the least developed countries.
3. Design a development project/s under ODA funding for capacity development in analytical chemistry. Enhancing the relevance, impact and development policy alignment in a cost-efficient way would require prioritizing countries from the groups of the **two least developed country categories**. A project should be designed for 2-3 countries to be assisted for 1-2 years. The funds used for Basic and Advanced training courses should be transferred to projects aiming at capacity building in analytical chemistry in the laboratories that are cooperating with the National Authorities. Hence, the CWC requirements would also be met with the improved capacity.

4. Use complementary aid modalities to bring in synergies, since it is assumed that the funding frame will remain at the existing level; hence other sources for funding should be identified to complement the project
5. Support to existing regional networks in analytical chemistry for which VERIFIN could provide expert services and thus promote sustainability.
6. Strengthen the dialogue between the Development Policy Department, Political Department of MFA and VERIFIN in all aspects of the ODA-funded training in CWC

Lessons learned

The dual role of VERIFIN and its dual funding sources have led to a situation where a single training modality has tried to fulfill simultaneously two sets of policy demands, which both would require different types of approach. Hence, the principles of development cooperation have not been adhered to sufficiently in the VERIFIN training concept and modality.

The lesson learned from this state of affairs is that VERIFIN should have received more guidance from the Development Policy Department in planning the training programme. This should have been stronger particularly after the Mid-Term Review that was undertaken 10 years ago. An inter-departmental project would have needed a sound inter-departmental instrument for dialogue and policy guidance.

Summary of Main Findings, Conclusions and Recommendations

Main findings	Conclusions	Recommendations (numbered according to chapter 5)
Relevance		
CWC requirements have guided the VERIFIN training contents, training materials and methods.	VERIFIN training has supported the CWC implementation and hence, relevant.	VERIFIN training related to CWC requirements should be continued, but funded through OPCW, non-ODA-funds (R 1).
Development Policy Goals with emphasis on the Least Developed Countries have not guided the training modality.	Training modality that offers Helsinki -based training in unified modality does not meet the needs of the least developed countries.	Training should move from training of individuals to institutional capacity building. ODA funds should be used for a capacity building project in the developing countries. Link with the CWC would remain through selecting the supported laboratories among those that cooperate with the NA (R1).
Efficiency		
VERIFIN prepares the 3-year Project Documents (training plans) that are not aligned with the MFA Guidelines. VERIFIN is governed by the Board of Directors that approves the documents before submission to MFA for final approval. The Political Department of MFA is responsible for VERIFIN supervision.	VERIFIN implements efficiently the training programme in Helsinki due to its 20 years of experience and highly professional staff and facilities in the university.	Role of the Department of Development Policy should be strengthened in planning and monitoring of the training (R 6).

<p>Training is funded through ODA-funds and VERIFIN's tasks as the National Authority through funds from the Political department (POL-funds).</p>	<p>Unit costs of Helsinki-based training are high due to low number of participants in the Basic and Advanced Courses (4/course) and high administrative costs resulted mainly from the rental costs of for training facilities.</p> <p>Nearly half of the ODA-funds (2008 and 2009) have been used for research that primarily supports the CWC training not the Basic and Advanced Courses and VERIFIN's status as the designated laboratory.</p>	<p>Transfer most ODA-funded training to the developing countries (R 1).</p> <p>Finance research through POL-funds (R 2).</p> <p>Finance the short courses aiming at passing the Proficiency Test by OPCW (R 1).</p> <p>Continue the NACD course funding through ODA-funds since it has built the developing countries' capacity to adhere the CWC requirements and is in line with the Finnish Development policy goals of good governance and anti-corruption (R1).</p>
Effectiveness		
<p>Selection criteria have emphasized academic qualifications and suitable professional experience.</p> <p>Equal geographical and gender distribution has also been aimed at when selecting the trainees.</p>	<p>Learning results have been good in the training partly because of the homogenous groups.</p> <p>Trainees have been equally distributed between the continents and the share of women in the training has increased over the years.</p>	<p>Prioritise the least developed countries in the selection to have a better alignment with the Finnish development policy (R 1).</p>
<p>Curricula and training materials have been developed by the VERIFIN instructors.</p> <p>Training methodology has complemented the</p>	<p>The training materials are of high quality.</p> <p>Hands-on training is appreciated by the trainees.</p>	<p>Move to in-country training modality with better alignment with the developing countries' priorities, including using analytical chemistry to solve environmental issues,</p>

<p>theoretical training by hands-on training.</p> <p>Feedback from the trainees is collected after each course with a written questionnaire.</p> <p>Post-training monitoring has not been done by VERIFIN.</p>	<p>Some alterations have been made on the course programmes based on the feedback.</p> <p>VERIFIN does not monitor the trainees in their home countries after the training. Programmes are not based on analysis of the issues and training needs in the developing countries.</p> <p>The prevailing training modality is guided by the CWC requirement that has led to a supply-based training modality instead of demand-based.</p>	<p>when ODA-funds are used (R 3).</p>
Impact		
<p>VERIFIN is not involved in follow up of the impact of the training in the recipient countries.</p> <p>Evaluation assessed the impact from two angles; (1) Role in CWC implementation; and (2) Using the learned skills in the laboratory in the home country and training others in the skills learned.</p>	<p>The clearest positive training impact was that the skills of preparing the Declarations to OPCW had improved as a result of the NACD course. Wealthier middle-income countries like Malaysia and Indonesia prioritize passing the proficiency test and attaining the designated laboratory status in the country. The intended impact of passing the proficiency test had not been accomplished in Malaysia nor in Indonesia.</p> <p>Majority of respondents reported having learned to use the sophisticated</p>	<p>Continue NACD course with ODA-funding using the current modality of training in Helsinki (R1).</p> <p>Divide the training into two categories; (1) CWC related training, and (2) training with broader development goals (R1).</p> <p>Base the ODA-funded training on national priorities and training needs (R 3).</p>

	<p>equipment in analysis, sample preparation and interpreting the results. A few respondents reported that they had not used the skills primarily because their work had not been relevant for the training. Many had also trained their colleagues. The interviews during the field mission revealed that the training of others was not based on NA's systematic approach but more on occasional <i>ad hoc</i> advice given to colleagues.</p> <p>The training concept itself lessens the possibility of wider impact, because the selection favors qualified candidates (individual impact) not the countries with greatest needs for training (institutional impact). Threat of chemical weapons is not an issue in the least developed countries whose training needs relate more to environmental protection.</p>	
Sustainability		
<p>Institutional level sustainability has been accomplished through the NAs commitment to adhere to the CWC requirements.</p>	<p>The most sustainable element in VERIFIN training has been the enhanced capacity to prepare annual declarations for the OPCW. NACD training has brought the intended results.</p>	<p>Continue the NACD course with ODA funds (R 1).</p>

<p>NA's role in different countries in selecting candidates to VERIFIN training and their strategy to utilize their skills after the training vary.</p>	<p>Ethiopia and Malaysia had an active role in pre-selection of candidates and had also assigned them to CWC related roles. The weakest sustainability in this aspect was in Mexico and Panama where most trainees did not work in relevant fields.</p>	<p>Prioritize the countries for training from the least developed groups and include a country from the mid-income level only for well justified reasons (R 3).</p> <p>Change the training strategy from individual-based training to institution-based training (R 3).</p>
<p>Finnish Value-added</p>		
<p>The most substantial value-added feature of VERIFIN has been the long-term commitment to providing training for the Member States of CWC in the developing world.</p>	<p>Throughout the 20 years VERIFIN has gained experience and expertise in training and research. OPCW and the Member States of CWC have learned to rely on the availability of the training in Finland. Hence, no other Member State has funded training on long-term basis.</p>	<p>Courses aimed at supporting the Member States of CWC in the developing world to pass the Proficiency Test and attaining a laboratory with the designated status should be funded by OPCW, not with the ODA-funds from Finland (R1).</p>
<p>General and cross-cutting issues</p>		
<p>Geographical coverage and gender have been dealt with in connection to effectiveness.</p> <p>Environmental issues can be seen as a cross-cutting issue, but also as a policy goal in the VERIFIN training.</p>	<p>VERIFIN training in analytical chemistry is in line with the environmental policy goal, but the diversified needs of the countries at different development levels, have not been taken into account. Tailoring courses for the country-specific needs has not taken place due to the training concept which focuses on supply instead of demand.</p>	<p>Design a project on Capacity Enhancement in Analytical Chemistry for the least developed countries preferably for Sub-Saharan Africa as a pilot that would focus on the national needs (R 3).</p>

<p>Using appropriate technology in training is related to the technological level of the developing countries. VERIFIN laboratory has facilities of high technological level. It is one of the designated laboratories in the world and undertakes sophisticated research in chemicals that relate to implementing the Chemical Weapons Convention. The training is at high level of sophistication as well.</p>	<p>Availability of high technology equipment has improved over the last few years due to OPCW equipment donation programme and other donations as well. The issues related to unavailability of spare parts, consumables and maintenance services in the least developed countries should be solved.</p> <p>Because of many problems related to operations of analytical instruments, the visited laboratories used alternative, less sophisticated methods of analyses, for example thin layer chromatography (TLC). VERIFIN does not teach these alternative, simple methods, but the visited laboratories themselves seemed to be very competent using these methods.</p>	<p>No recommendations on inclusion of simpler analytical methods in training in Finland. If it is an issue in some developing country it will be dealt with when designing a new project to be implemented as an in-country modality (R 3).</p>
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1 BACKGROUND

1.1 Introduction

1.1.1 Purpose and Objectives of the Evaluation

The purpose of this evaluation is to update the information on the training delivered by the Finnish Institute for Verification of the Chemical Weapons Convention (VERIFIN). The evaluation will offer an external and independent view on the different dimensions of the training programme, including institutional set-up, programme concept, contents and working modalities of the training programme and its significance in fulfilling the objectives set to VERIFIN at different levels (Annex 1, Terms of reference, TOR, p. 3).

The TOR further translates the purpose into objectives that define the expected results and describe the process of the evaluation:

- (1) draw lessons from the past experience of the VERIFIN training for the benefit of planning the future training programmes in order to achieve the best possible impact and added-value;
- (2) serve as accountability tool for the ODA funds expenditure; and (3) verification of the results of the programme at field level.

The evaluation will specifically provide:

- a. An external view how the 2001-2002 evaluation results and recommendations have been addressed and taken into account.
- b. An expert assessment of the training concept and modality, its administration and functions and an assessment on possible needs for further development.
- c. Advice how to utilize the competencies achieved by the VERIFIN training in the developing country contexts.
- d. Views on the multiplier effect of the training modality, including the South-South dimension.

1.1.2 Scope

In order to achieve the objectives of the TOR the evaluation gathered information at various levels including stakeholders, target groups and beneficiaries of the VERIFIN training:

- **Political level** – Ministry for Foreign Affairs of Finland (MFA), possibly other ministries in Finland and Governments of developing countries as *stakeholders*;
- **Operational level** – OPCW (Organization for the Prohibition of Chemical Weapons), National Authorities in Developing Countries as *stakeholders and beneficiaries*;
- **Institutional level in Finland** - VERIFIN as the training provider and *target* for the evaluation;

- **Institutional level in the developing countries** - the National Authorities (NA), beneficiary laboratories and possibly other institutions (e.g. universities) as *beneficiaries*;
- **Individual level** - the trainees as *beneficiaries*.

1.2 Methodology and Data Collection

1.2.1 The Leading Principles in the Evaluation Process

The following leading principles in the evaluation process were followed:

- **Team work:** the evaluation team worked closely together in planning the methodology, preparing the field visits and interviews, analyzing the findings and drawing conclusions.
- **Participatory:** evaluation was conducted through a consultative process in the participating institutions in Finland, and in the selected developing countries in Africa, Asia and Latin America.
- **Reflective process:** the data collected from various sources (e.g. document reviews, interviews of trainees, VERIFIN staff, OPCW, MFA, field visits etc) was assessed synthesizing the perspectives of different levels of data sources before drawing conclusions on the evaluation criteria.

1.2.2 The Data Collection Methods

The data collection was done at the following levels:

- Desk Study of documents (project plans, progress reports, previous evaluation, training programmes, training materials and policy documents etc.);
- Interviews with the relevant officials at MFA, VERIFIN and OPCW Headquarters in the Hague and the Embassy of Finland in the Hague;
- Interviews with the staff at the Crisis Management Centre (CMC) in Kuopio;
- Observing ongoing training in Finland and interviewing trainees;
- Field visits to Ethiopia, Kenya, Malaysia, Vietnam, Mexico and Panama, where Embassies of Finland, National Authorities and former trainees were interviewed, visits to laboratories where the trainees worked, visits to Faculties of Chemistry in Universities and visits to textile and pharmaceutical factories in Ethiopia and Kenya ;
- Electronic survey of former Basic Course participants.

Data analysis was through triangulation - a qualitative method in which data from different sources (interviews, documents, questionnaires etc.) are compared against each other. This eventually enhances the reliability and validity of the conclusions as they are not based only on observations of one-sided viewpoints.

Since the project document does not include pre-set objectively verifiable indicators the analysis was based on observations by the evaluators concerning the programme

concept in regard to policy frameworks. Identification of changes in the programme implementation particularly during the last ten years (the main scope of the evaluation) was also an important evaluation objective. A thorough analysis of the training programmes has been undertaken by comparing the logical compatibility of the course structures, contents, methods, training materials with the objectives of the Basic and Advanced Courses expressed in the Project Documents, Progress Reports and Training Materials.

Field missions to six countries in three continents were conducted where NAs, former trainees were interviewed and laboratories visited. According to our view this sample, even though not very large, gives a fairly representative view on the performance of the training programme for drawing valid conclusions.

The evaluation has been done in four phases as stipulated by the TOR to ensure the validity and reliability of the findings and recommendations. These were:

- (1) Inception phase;
- (2) Evaluation process;
- (3) Preparing the Desk report; and
- (4) Write-up of the Final Report.

Written feed-back from the Development Evaluation of MFA (EVA-11) and the Political Department, Unit for the Arms Control, Disarmament and Non-Proliferation (POL-20) was received on the Inception Report and the Desk Report and the work continued after their approvals. After the field visits meetings were held at the MFA and preliminary findings on the field missions were presented: (1) First meeting with EVA-11 (2) Second meeting with EVA-11 and POL-20; and (3) the meeting continued with the participation of the VERIFIN representatives.

1.2.3 Statistical Data from the Questionnaires

Information from former trainees was collected with interviews during the field missions and through sending questionnaires via e-mail and, sometimes combining these two methods. E-mail questionnaires were sent to all Basic Course participants (54) of 2000-2010, and in advance to all former trainees of the field visit countries (42). E-mail questionnaires were also sent to Brazil and Jamaica (altogether 11). These countries were originally included in the field missions but later cancelled due to time restrictions. Questionnaires were filled also when trainees were interviewed in Helsinki during their training (three advanced course participants of 2010, four basic course participants of 2011, four ASD course participants of 2011 and one Intern of 2010). The same information was collected from all trainees, but during the personal interviews more in-depth information was received.

Altogether 107 e-mail questionnaires were sent. Eight participants were interviewed at VERIFIN during their training. Table 1 gives data on the number, gender and courses of the respondents who represent about 50% of the sample of selected for the study. Annex 5 gives summaries to all questions.

Table 1 Summary of responses to the questionnaires.

Field mission country	Total	F	M	Courses attended				
				Basic	Advanced	NACD	Workshops	Internship
Ethiopia	3	1	2	2		1	1	
Kenya	7	3	4	1	1	2	5	
Malaysia	8	6	2	3		1	4	1
Vietnam	4		4	1	1	2	3	1
Mexico	7	5	2	1		2	5	
Panama	1	1		1	1			
Sub-total	30	16	14	9	3	8	14	2
Other countries								
Africa	8	3	6	6	2	2	1	1
Asia	9	3	6	6	3	2	3	
Latin America	5	1	4	5			3	
Europe	2		2	2	1			
Sub-total	25	7	18	19	6	4	7	1
Grand-total	54	23	32	27	9	12	21	3

1.2.4 Evaluation Indicators and Analysis

The matrix (Table 2) conceptualises the evaluation process by linking the OECD/DAC evaluation criteria with the dimensions of VERIFIN training and indicators. Evaluative questions form a bridge between the criteria and the indicators. Based on the matrix questionnaires and interviews, check lists were designed for each level of data collection specified in the ToR (Annex I).

1.3 Recommendations of the 2002 Mid-Term Review of the Training of CWC

The previous evaluation (Kivimäki 2002) was undertaken after ten years of implementing the VERIFIN training programme. It was expected to facilitate MFA's decision-making regarding future commitments in the field of CW-verification with the main emphasis on the training component. It aimed at

- i. assessing the adequacy and relevance of the training;
- ii. reviewing the impacts of the programme in the participants' countries;
- iii. assessing the cost-efficiency;

Table 2 Evaluation matrix.

Criteria	Dimensions of evaluation	Evaluative question	Indicators
Coherence and synergies	<p>Wider political context</p> <p>Promoting Finland's arms control, disarmament and non-proliferation policies</p> <p>Compatibility of Finland's development policies with the CWC and VERIFIN training</p>	<p>What role has VERIFIN training played in global disarmament and non-proliferation of chemical weapons and in assistance and protection? Has the Global Political context changed and affected the CWC implementation?</p> <p>How has VERIFIN training promoted Finland's arms control, disarmament and non-proliferation policy goals and how they have been taken into account?</p> <p>Which Finnish development policy goals are compatible with CWC and VERIFIN training and how they have been taken into account?</p> <p>Does the country selection represent the Finnish Development Policy Goal of prioritizing the Least Developed Countries?</p>	<p>Current situation in global implementation of CWC – recipient State Parties and their actions to implement the CWC</p> <p>Adherence to Finnish Security and Defense Policy (2009)</p> <p>Adherence to Finland's development policy goals that are in accordance with the UN Millennium Development Goals</p> <p>Particular reference to MDG Goal 7: Ensure environmental sustainability</p> <p>Trends in Statistics on country selection over the years</p>
Relevance	<p>VERIFIN training contents vs. CWC demands and compatibility with the developing countries' situation</p>	<p>Has the planning of the VERIFIN training taken into account the developing countries' needs for training?</p>	<p>Curricula and methodology of the various VERIFIN training programmes over the 20 years</p> <p>Improved reporting on CWC qualitatively and quantitatively</p>

Criteria	Dimensions of evaluation	Evaluative question	Indicators
		<p>Has the VERIFIN training enhanced the knowledge and skills to implement CWC in the developing countries?</p> <p>Is the training programme based on training needs analysis?</p> <p>Are the CWC requirements fully adhered to?</p> <p>Is there a regular dialogue between VERIFIN and MFA and OPCW on the global/regional changes in the situation of chemical warfare agents and its possible impacts on the training contents?</p>	
Efficiency	<p>Administration, governance and financial management of the VERIFIN training</p> <p>Preparation process of the curriculum of the VERIFIN training pro-</p>	<p>How are the planning, implementing, monitoring and reporting of the VERIFIN training organized?</p> <p>What has been the role of different partners (MFA, VERIFIN, OPCW) in the planning, management and monitoring of the programme?</p> <p>Has VERIFIN received feed-back and advice from the funding organisations (MFA, OPCW) annually?</p> <p>Have the administrative procedures of the training been developed over the years based on the feed-back?</p>	<p>Administrative & management system of VERIFIN</p> <p>Annual reports of VERIFIN training and their improvement towards analytical approach over the years</p> <p>Monitoring system development</p> <p>Organisational set-up of VERIFIN; staff roles and responsibilities in training and overall VERIFIN activities</p> <p>Unit-costs of VERIFIN training in relation to the number of staff and number of trainees per annum</p>

Criteria	Dimensions of evaluation	Evaluative question	Indicators
	<p>programme, implementation modalities, monitoring and reporting system</p> <p>Cost-efficiency analysis</p>	<p>Are the resources allocated to VERIFIN adequate in achieving the objectives of the training? Are funds allocated to monitor the trainees after the training?</p> <p>Are the administrative costs in proper relation with the results?</p> <p>What is the share of training in the overall activity of VERIFIN?</p> <p>What is the share of training funded through other sources than MFA/ODA in the VERIFIN training budget?</p>	<p>Share of different training modalities (Basic, Advanced, Internship and Workshops) in the training programme entity</p> <p>VERIFIN total budget vs. training budget</p>
Effectiveness	<p>Validity of the training concept</p> <p>Selection process</p>	<p>How have the recommendations of the Mid-Term Evaluation 2001-2002 of VERIFIN been taken into account?</p> <p>How has the training concept evolved since the beginning?</p> <p>How are the students and countries for the different training programmes selected?</p> <p>Have there been different criteria for selection of trainees in different countries/regions based on particular needs in the country/region?</p>	<p>Changes in the training programmes over the past years</p> <p>Trends in numbers of trainees in developing countries and regions over the past years</p> <p>Trainee selection system overall and country-specific</p> <p>Selection criteria in terms of knowledge in analytical chemistry</p>

Criteria	Dimensions of evaluation	Evaluative question	Indicators
	<p>Learning results in relation to the VERIFIN training objectives concerning the knowledge and skills enhancement in analytical chemistry</p>	<p>Are the selection criteria published and transparent to the applicants?</p> <p>Which partners participate in the selection of trainees and what are their roles?</p> <p>What types of institutions do the trainees come from?</p> <p>Has VERIFIN been successful in producing the intended learning results/knowledge enhancement?</p> <p>How are the trainees evaluated?</p>	<p>Test results indicating the success rates of the VERIFIN training over the years and in different types of training programmes</p>
Impact	<p>Capacity enhancement in the developing country institutions</p> <p>Effects on trainees' career prospects</p>	<p>Have the trainees contributed to the capacity of the laboratories/other institutions in their home countries?</p> <p>Has the training had an impact on the career of the trainees?</p> <p>Are the trainees still working in the laboratories of their home countries?</p> <p>Where are the trainees currently employed?</p>	<p>Role as trainer of colleagues</p> <p>Participation in inspection teams</p> <p>Participation in institutional development in the home country</p> <p>Promotion of trainees</p> <p>Possible "brain drain" effect statistics</p> <p>% of trainees working in relevant professions</p>

Criteria	Dimensions of evaluation	Evaluative question	Indicators
Sustainability	<p>Analytical capacity enhancement in other areas, e.g. environmental</p> <p>Utilisation of the enhanced knowledge and skills in analytical chemistry in the developing countries</p> <p>Laboratory infrastructure vs. the acquired skills in the training programme</p>	<p>Has the analytical capacity enhancement been utilized in other important areas?</p> <p>Has a follow-up mechanism been instituted at VERIFIN to monitor the impact of the training in the developing countries?</p> <p>Have the trainees been able to utilize their analytical skills in their home countries?</p> <p>Have the trainees participated in inspection of chemical warfare agents or other inspections in their home countries or in the region?</p> <p>What has been the role of trainees in their home countries after the training?</p> <p>Did the trainees receive training materials to be used in their home countries?</p> <p>Have the laboratories in developing countries received sufficient funding from their own governments or elsewhere to undertake the needed chemical analyses?</p> <p>Do the laboratories in developing countries cooperate with other partners to strengthen their capacity?</p> <p>Have the laboratories received modern equipment for CW analysis?</p>	<p>CWC implementation in the developing countries and the role of the trainees</p> <p>Differences between Africa, Asia and Latin America in CWC implementation</p> <p>Laboratory situation in developing countries - differences between the Least Developed Countries and other developing countries</p> <p>Funding situation in the developing countries</p> <p>Trends in acquiring new equipment over the last years of VERIFIN training and funding agencies</p>

Criteria	Dimensions of evaluation	Evaluative question	Indicators
Coordination, cooperation and complementarity	<p>Cooperation and coordination mechanism under the OPCW among the developed countries</p> <p>South-south cooperation and coordination mechanism among the developing countries</p> <p>OPCW priorities and VERIFIN training's complementary role</p>	<p>How is the coordination and cooperation organized among the developed countries?</p> <p>What is the role of OPCW in coordination?</p> <p>Has there been cooperation and coordination between the developing countries?</p> <p>Does Protechnik laboratory play a special role in Africa?</p> <p>How does VERIFIN training correlate with OPCW priorities?</p> <p>Is there a regular cooperation mechanism between MFA; OPCW and VERIFIN to ensure information sharing on the CWC implementation and possible changes in the international context?</p>	<p>Other donors in CWC implementation and coordination mechanism</p> <p>Compliance with the OPCW training priorities</p>
Finnish Value Added	Benefits of VERIFIN training compared with training provided by other countries	<p>Are there other training institutions involved in CWC training for developed and developing countries?</p> <p>If VERIFIN training had not been implemented, what would be the situation in CWC implementation?</p>	<p>Other training institutions and their roles</p> <p>Comparative data between VERIFIN and others</p>

Criteria	Dimensions of evaluation	Evaluative question	Indicators
Cross-cutting issues	Promotion of relevant cross-cutting themes of the Finnish Development Policy	<p>Which cross-cutting themes are promoted through VERIFIN training programme?</p> <p>Is gender one of the selection criteria for the VERIFIN training as recommended by the previous evaluation?</p> <p>Has the training programme contributed to global security?</p>	<p>Reported views of the interviewed MFA, VERIFIN, OPCW and representatives from the developing country authorities</p> <p>Trend in the numbers of women trainees over the 20 years</p> <p>CWC compliance of the Developing countries</p>

- iv. analyzing the project administration and management and monitoring and;
- v. giving recommendations for the future.

It is worth noting that the TOR for the MTR was somewhat broader than the TOR of this evaluation because it was expected to give advice on the MFA commitments on CW-verification process itself.

Its main recommendations that are relevant to this evaluation are summarized below:

- i. Enhancing complementarity with other programmes (funded by other partner countries) in capacity building;
- ii. Enhancing gender balance in student selection;
- iii. Considering probably more the political objective in the selection of countries from which trainees are selected, recognizing the discrepancy stemming from the fact that the absorption capacity is weakest in the poorest countries (priority in the Finnish Development Policy) and hence having the greatest need of training vs. countries that can utilize the skills due to higher level income (mid-income countries) and better material and human resources;
- iv. Improve information exchange between VERIFIN and other ministries including a proposal of strengthening the communication between the Finnish Embassies in the developing countries and the National Authorities;
- v. VERIFIN training to be utilized in development of South-South communication and regional cooperation; and
- vi. VERIFIN training could be utilized more efficiently in promoting Finland's "image policies".

The current evaluation undertakes follow-up of implementation of these recommendations.

1.4 Chemical Weapons Convention

The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and their Destruction (OPCW 2005; later referred as the Chemical Weapons Convention, CWC) was finalized in 1992 and entered into force in 1997. Today 188 states have ratified or acceded to the Convention. There still are seven countries in the world that are non-members of the CWC (Israel and Myanmar, signatories but not yet ratified, Angola, Egypt, North Korea, Somalia and Syria, neither signatories, nor acceded).

The goals of the CWC are:

- To exclude completely, for the sake of the mankind, the possibility of the use of chemical weapons;
- To ensure that achievements in chemistry are used exclusively for the benefit of the mankind;

- To promote free trade in chemicals as well as international cooperation and exchange of scientific and technical information in the field of peaceful chemical activities; and
- To contribute to the realization of the purposes and principles of the Charter of the United Nations.

The five pillars of the CWC are:

- Destruction of chemical weapons stockpiles and their associated production facilities (Articles I, II, III, IV, and V);
- Non-proliferation – only peaceful use of chemistry (Article VI);
- Preparing National Declarations to the OPCW and endorsing legislation (Article VII);
- Protection and Assistance (Article X); and
- International cooperation (Article XI).

Management Structure of the CWC

(1) OPCW: The Organisation of Prohibition of Chemical Weapons (OPCW) was established in 1997 in the Hague, Netherlands to support the implementation of the CWC in the member states. It is an independent, autonomous organization with a working relationship with the United Nations. It provides a forum for cooperation and consultation among the State Parties. The decision-making bodies are the Executive Council and the Conference of the State Parties. The Technical Secretariat carries out inspections, declaration analysis, implementation support to member states, assistance and international cooperation. It has a staff of 500 including 200 inspectors representing 80 nationalities. All existing chemical weapons are to be disarmed by 2012 in those seven countries that have declared possessing chemical weapons. More than 60% of the CWs are verifiably destroyed and 89% of the chemical weapons production facilities have been destroyed or converted. The Member States represent about 98% of the global population and 98% of the worldwide chemical industry.

(2) National Level: Member States are obliged to establish a National Authority to facilitate OPCW inspections of relevant industrial or military sites; submit initial and annual declarations; assist and protect those State Parties threatened by or which have suffered chemical attack and promote peaceful uses of chemistry. The NA is also a focal point in interaction with other State Parties and the OPCW. Legislation against prohibited activities must also be passed in the Member State. So far 182 National Authorities have been established and 126 State Parties have taken the legislative and administrative measures for CWC implementation, 83 State Parties have passed the fully-fledged legislation on CWC.

(3) International Cooperation in the Peaceful Uses of Chemistry: International cooperation is promoted in many areas (e.g. chemical research, improving laboratory capacity, internships and training). OPCW's broad intervention in developing countries and the VERIFIN training programme financed through Finland's development cooperation funds complement each other, providing synergy benefits to CWC implementation in

developing countries. International cooperation activities are meant for realizing the purpose and objectives set by the Article XI of the CWC.

The OPCW programmes are:

(1) *Associate Programme* that was established in 2000, facilitating capacity building and industry-related national implementation of the CWC. Altogether 181 associates have participated from Africa, Asia, Latin America, Eastern Europe and Western Europe and other states.

(2) *Analytical Skills Development Course* that was established in 2004 assisting qualified analytical chemists to acquire further practical experience related to national implementation of the CWC. Various types of workshops have been organized; e.g. ASDC, CW-LSE, CW-AC/PT, CW-LABEX for 186 chemists from Africa, Asia, Latin America, Eastern and Western Europe and other states. VERIFIN has organized **most of these workshops** with the OPCW and MFA funding except for ASDC which is solely funded by OPCW or EU.

(3) *Conference Support Programme* established in 1997 to facilitate the exchange of scientific and technical information related to topics relevant to the CWC. 1765 participants from Africa, Asia, Eastern Europe, Latin America and Caribbean have benefited from these events.

(4) *Research Projects Programme* established in 1997, assisting small scale research projects in targeted countries for the development of scientific and technical knowledge in chemistry (e.g. industrial, agricultural, medical). 382 projects in Africa, Asia, Eastern Europe, Latin America, Western Europe and other states have benefitted from this programme.

(5) *Internship Support Programme* for scientists and engineers from developing countries conducting advanced research in laboratories in industrialised countries. 76 interns from Africa, Asia, Eastern Europe, Latin America, and Western Europe and other countries have been supported by the OPCW.

(6) *Laboratory Assistance Programme* established in 1997, aiming at improving the technical competence of laboratories engaged in in chemical analysis and monitoring. 61 laboratories in Africa, Asia, Eastern Europe, Latin America and Western Europe and other countries have benefitted from this programme.

(7) *Equipment Exchange Programme* facilitates the transfer of used and functional equipment to publicly funded laboratories and other academic institutions in developing countries from institutions in industrialised countries. 68 transfers have taken place mainly to Africa, Asia, Eastern Europe and Latin America.

In addition to the programmes outlined above the International Cooperation Branch in OPCW have recently initiated two new programmes:

(1) *The Africa Programme* activities and interventions to respond to the particular needs of African Member States; and

(2) *Industry Outreach* seminars in chemical industry outreach and industry-related aspects of implementation.

Cooperation and Coordination with other Organisations

Cooperation includes co-funding of projects and the organization of regional workshops and courses. Most of these activities relate to supporting the implementation of Article XI. International Foundation of Science, World Health Organisation, World Customs Organisation, the European Chemical Industry Council (CEFIC), Protechnik laboratory in South Africa, VERIFIN, University of Uppsala are some of the organisations that OPCW has cooperated with. One two-week Analytical Skills Course has been implemented in Spanish with Spanish voluntary contribution. ASD course has also been held in Russia and Ukraine in Russian. In addition, some courses have been designed for national participants and tailored to meet the national needs.

Assistance and Protection

Chemical Weapons are frightening and dreadful weapons and they cause long-term suffering on a mass scale. Some Member States have the capacity to protect their populations against chemical weapons while others do not. All Member States have pledged to provide assistance and protection to fellow Member States threatened by the use of chemical weapons or attacks with chemical weapons. In order to enhance capacity in this vitally important area the OPCW organizes training through Assistance & Protection Courses that emphasise expertise in predicting hazards, in detecting and decontaminating chemical agents, in medical relief, and on-site coordination with humanitarian and disaster response agencies. The target groups for this training are first responders, government experts and emergency response systems. The purpose is to build and develop national and regional capabilities and emergency response systems against use, or threat of use, of chemical weapons. Two thousand two hundred participants from Africa (350), Asia (600), Latin America (500) and Eastern Europe (750) have benefitted from these courses. The OPCW has funded of one of these courses per annum in the Crisis Management Centre in Kuopio, Finland (93 participants during 2000-2010). VERIFIN has also contributed to planning and implementing this course.

1.5 Finnish Policies providing the Framework for the VERIFIN Training

1.5.1 Finland's Development Policy 2007

Development Policy is an integral part of Finland's foreign and security policy. The main goal of development policy is to eradicate poverty and to promote sustainable development in accordance with the UN Millennium Development Goals (MDG's)

which were set in 2000 to be achieved by 2015. The eight MDG's are:

- (1) Eradicate extreme poverty and hunger;
- (2) Achieve universal primary education;
- (3) Promote gender equality and empower women;
- (4) Reduce child mortality;
- (5) Improve maternal health;
- (6) Combat HIV/AIDS, malaria and other diseases;
- (7) Ensure environmental sustainability; and
- (8) Develop a global partnership for development.

Eradicating poverty is possible only if progress made in developing countries is economically, socially and ecologically sustainable. These dimensions of sustainability are intertwined. Poverty-reducing economic development has to be ecologically sustainable. For this to be possible, social conditions must be stable. This means having peace and security, well-functioning democratic governance, respect for human rights, inclusive social and cultural development, and action to fight corruption (MFA 2007)

Finland stresses a wider security concept which strengthens the link between security, development and human rights. Strengthening security requires extensive international cooperation and decisive national action across administrative boundaries. The significance of Africa in the Finnish Foreign Policy is acknowledged by the fact that a separate document, *Africa in Finnish Foreign Policy* (MFA 2009; 2010a) has been endorsed. It emphasizes the importance of Africa's development under the framework of political stability and security and trade and economic relations that pave the way for development with the overall goal of poverty alleviation. Approximately 50 per cent of the Finnish bilateral development cooperation funds are allocated to Africa. The long-term partner countries have been Ethiopia, Kenya, Mozambique, Zambia and Tanzania.

1.5.2 Development and Security in Finland's Development Policy

Finland's work to promote development and security is based on respecting and implementing the principles of international law and conventions, as well as the principles and operational programmes agreed within the international community (especially EU, UN and OECD). Finland emphasizes that promoting stability and security, as well as strengthening democracy, the rule of law, human rights and civil society create the foundation for sustainable development at the global level. Finland promotes also coherence in crisis management, development cooperation and humanitarian assistance, in accordance with the European Union's policies on security and development. The aim is to adopt a comprehensive approach to conflict prevention, crisis management and post-conflict recovery and reconstruction.

Social stability and comprehensive security are prerequisites for all development. Improving the rights and position of women and girls, strengthening gender and social equality, improving the rights and equal opportunities for participation of vulnerable

groups, especially children, disabled, indigenous peoples and ethnic minorities, and combating HIV/AIDS constitute the essential elements in the field of development and security.

Good governance has a positive correlation with peaceful development. Economic well-being and sustainable development cannot be achieved without sound, legal administrative structures and systems that serves citizens (MFA 2010b).

2 DESCRIPTION OF THE VERIFIN TRAINING PROGRAMME

2.1 Background

The Finnish Institute for Verification of the Chemical Weapons Convention was established in 1994 as a continuation of the Chemical Weapons Research Project founded in 1973. It is an independent unit under the Department of Chemistry in the University of Helsinki. VERIFIN supports the control mechanism of the CWC by developing research methods for identification and verification of the chemical warfare agents and by giving training for participants from the developing and transition countries.

VERIFIN is also one of the 19 Designated Laboratories in the world and works in close cooperation with the OPCW. VERIFIN has assisted MFA in the Executive Council meetings when Finland was a member of the OPCW Council. VERIFIN is a member of the Scientific Advisory Board of the OPCW. Its budget comes mainly from the Ministry for Foreign Affairs with an average annual allocation of 400 000 euros from the Political Department and 450 000 euros from the Development Policy Department. In addition, VERIFIN receives funding from other sources, mainly for research. The Government of Qatar has also contracted VERIFIN to conduct training at VERIFIN premises in Helsinki.

2.2 Organisation and Governance of VERIFIN

The contract between the Ministry for Foreign Affairs Political Department and VERIFIN stipulates the objectives and functions of VERIFIN as an institution. This contract has been signed between the parties for each four-year period since 1994. The latest contract was signed in 2010 covering the years 2010-2013.

The MFA has assigned VERIFIN to perform the responsibilities and duties of the National Authority stipulated in the Article VII of the Chemical Weapons Convention with the objective to perform the legal duties of the National Authority and the Designated Laboratory as defined in the law (346/1997, revised 485/2007). VERI-

FIN also acts as an expert organization for the MFA in implementing the CWC directives. Guidance and funding for VERIFIN is provided from the Ministry for Foreign Affairs, Finland. One of VERIFIN's responsibilities is to cooperate with the OPCW and other Member States.

VERIFIN is governed by the Board of Directors representing the Ministry for Foreign Affairs, Political Department, Unit for the Arms Control, Disarmament and Non-Proliferation (POL-20), the University of Helsinki, the Ministry of Defense and VERIFIN. It approves the Project Documents and Budgets and Progress Reports of VERIFIN. These are prepared for the ODA-funded part of VERIFIN. Activity plans and reports are also prepared for the utilization of the funds allocated from the Political Department. Twenty per cent of the VERIFIN budget is financed through Development Cooperation funds and 27% through the Political Department funding. In addition, the cooperation arrangements with domestic organisations and international laboratories are reported to the Board as part of the regular procedure.

According to 2010 Annual report, VERIFIN institution has 17 staff members, the Director and 12 laboratory and project managers, chemists and biochemists, 2 technicians and one secretary (VERIFIN 2010).

The activities are divided into four categories: (1) Research; (2) Verification; (3) National Authority; and 4) Training. These functions are supported by Administration and Quality System. The main purpose of the research is to develop analytical methods that are prerequisites for the CWC implementation and for teaching these methods and related practical work. Even though VERIFIN's training and many research activities are funded through ODA funds and represent a large share (20%) of VERIFIN's budget, the Finnish development cooperation principles are not highlighted in the contractual agreement between MFA and VERIFIN.

2.3 Description of the Training Programme

2.3.1 Introduction

The VERIFIN training programme has been implemented for 20 years since 1990. The major focus of this evaluation is on the training implemented over the past ten years, since 2000. The previous Mid-term Review (2002) covered the first decade of implementation (1990-2000).

For the evaluation purpose the training is divided into three categories.

(1) Training funded entirely from the MFA Development Cooperation Funds:

- Basic Course
- Advanced Course
- National Authority and Chemical Databases Course (NACD)

(2) *Training funded jointly from the OPCW and from the MFA Development Cooperation Funds:*

- Workshops, such as:
 - Course on the Analysis of Chemicals Related to the Chemical Weapons Convention in the Framework of OPCW proficiency testing (ACW-REP);
 - International Workshop on the Analysis of Chemicals Related to the Chemical Weapons Convention – Laboratory Exercise (CW-LABEX);
 - Laboratory Skills Enhancement for the Analysis of Chemicals Related to the Chemical Weapons Convention (CW-LSE);
- Basic Analytical Chemistry Course (BACC) implemented in South Africa;
- Internship Programme.

(3) *Training funded from additional Sources:*

- Assistance and Protection (A&P) – CMC, OPCW, MFA dev.;
- Analytical skills development course (ASD)- OPCW, EU

The main focus of this evaluation is on the first category where the courses are funded 100 per cent from the MFA Development Cooperation funds. All training is part of the three year Project Document and hence approved by the VERIFIN Board, where MFA is represented.

2.3.2 Student Selection

VERIFIN selects the students for the training funded exclusively by the Development Cooperation funds from the MFA. VERIFIN prepares the invitations to eligible governments (all DAC countries) to present candidates for the Basic, Advanced and NACD courses. OPCW receives these invitations from the Finnish Embassy in The Hague and then distribute them to the State Parties. VERIFIN does the final selection from the applications sent directly to them using the following criteria:

- suitability of the professional experience for the training programme;
- possible involvement with the NA;
- homogeneity of the group in regard to their academic and working experience;
- command of English language;
- equal distribution of gender, if possible; and
- equal geographical distribution.

The students for short courses (workshops) funded jointly by OPCW and MFA are interviewed and selected by OPCW and the selection is approved by VERIFIN.

2.3.3 Course Descriptions

(1) *Basic Training Course:* The aim of the Basic Training Course is to give basic knowledge and practical experience on sample preparation, gas chromatography (GC) with different detectors, including mass spectrometry (GC/MS). The course also includes a short introductory section on nuclear magnetic resonance spectroscopy (NMR), on liquid chromatography-mass spectrometry (LC-MS) and on Fourier Transform Infra-

Red Spectroscopy (FTIR). Independent problem solving at the end of the course gives the participants an opportunity for self-testing of their skills.

Distribution of time on different subject is as follows:

(1) Basic instrumental theory (GC, GC/MS)	4 weeks
(2) Hands-on sample preparation	3 weeks
(3) Independent Problem Solving	3 weeks
(4) Specific subjects (NMR, FTIR, quality systems, CWC, CWA, etc.)	1-2 days per subject

Approximately 50% of the time is spent on practical training. Troubleshooting and maintenance of the instruments are covered in theory and most importantly during hands-on sections. All examples are on CWAs; however, it is worth mentioning that most of what is learned can be applied to other applications, such as environmental analyses. This is certainly true of the use of equipment and instruments, because the same analytical instruments (GC, GC/MS etc.) can be used for environmental, food and forensic analyses. On the other hand, analyses of CWAs are mainly qualitative analyses answering to the question “Are there any CWA in the sample and what is it?” Quantitative analyses answering questions such as “How much DDT is there in the sample?” seem to be covered only in theory.

The duration of the Basic Course has been shortened gradually from four months during 2000-06, to three and a half months during 2007-10 and finally to three months from the beginning of 2011. The Basic Course is now three months in order to avoid the cumbersome procedure of applying for residence permits for the participants.

(2) *Advanced Training Course*: The aim of the Advanced Training Course is to give more detailed training than in the Basic Course on spectrometric analysis techniques (NMR, LC-MS, GC/FTIR). Lectures repeat the basics of each subject, before going more deeply into especially NMR and LC-MS. During the Advanced Course, trainees work more independently, concentrating on interpretation of the results and not on sample preparation. An additional section on quality systems was introduced in 2010. Since 2003 many participants of the Advanced Course have participated also in workshops held simultaneously, for example CW-LABEX and 13th Nordic Mass Spectrometry Conference in 2007.

Distribution of time on different subjects is as follows:

(1) GC/MS and Quality	4-5 weeks
(2) NMR	3 weeks
(3) LC-MS	3 weeks
(4) FTIR	1 week
(5) Workshops	1-2 weeks
(6) Independent Problem Solving	3 weeks

The course programmes do not clearly indicate which training is practical, but it seems that the Advanced Course contains even more practical and independent work than the Basic Course. The duration of the Advanced Course has been shortened to three months, like the Basic Course.

(3) *Training Course on National Authority and Chemical Databases (NACD)*: The aim of the NACD training is to give the NAs, or persons working closely in cooperation with NAs, information on launching the NA, implementing national legislation, making declarations including data collection from the industry, escorting OPCW inspections and giving an insight to fact-finding in existing databases useful in the work of the NA. NACD was started 2002. Since 2009, the Electronic Declaration Tool for National Authorities (EDNA) is being taught and practiced by the representative of OPCW: earlier a Swiss approach was presented by a representative of the Swiss NA.

Distribution of time is as follows:

- Lectures by OPCW/Swiss NA 3 days
- Lectures by VERIFIN 4 days
- Demonstrations and exercises 3 days

(4) *Short Courses including BACC (partial funding from the OPCW)*: The aims of the short courses (CW-LABEX, CW-LSE I and II, ACW-REP) are; firstly to enable the participants better utilise their laboratory capabilities and; secondly to provide the participants knowledge to advise their institutions in future purchase decisions to further develop their analytical capabilities. Short courses have been carried out since 2003, the contents and the duration of the courses vary and have been changed during the years. At present, CW-LSE II is concentrating on LC-MS and ACW-REP for laboratories aiming to become designated laboratories; for example, in ACW-REP about 20% is on reporting to OPCW using the OPCW's reporting forms.

The Basic Analytical Chemistry Course (BACC) gives training for participants from African countries in an African environment, where the challenges are similar to their own laboratories. Additionally, the course gives a chance to network with similar laboratories in neighbouring countries. This allows the laboratories to cooperate in local training and in problem solving and possibly also in obtaining service and spare parts. The training is held at Protechnik Laboratories, South Africa and the instructors are from VERIFIN, Protechnik and OPCW. BACC has been organized annually since 2009. OPCW gave additional funds in 2009 and 2010 to VERIFIN for further development of the course.

(5) *Course Materials*: Since 2004, most of the training material has been PowerPoint presentations that are of very high quality; explicit, informative and easy-to-read. Most of the slides are useful and understandable even without explanation and they can be used as a handbook in the trainees' home laboratories. VERIFIN'S own authentic quality documents and methods of analysis are also used.

Since 2008, training material has been distributed to the trainees as paper copies and as a CD-ROM. Paper copies are sent by post after training because of the large amount of the material. Some of the training material is used in several courses, for example in Basic and Advanced courses and in short courses. It is mentioned in Report 2008-10 that a major overhaul of training material was planned for year 2011 to bring it up-to-date. Although some of the material is quite old, it is difficult to assess how necessary this is, since the Basic Course material covers mainly basic analytical chemistry. Many Advanced Course presentations use the same introductory material as is used in the Basic Course even though all subjects are covered more deeply in the Advanced Course. Thus, the evaluation team has some problems in understanding the justification of updating thoroughly the training material dealing with basic analytical chemistry every year.

2.4 Research included in Training

VERIFIN conducts research which is funded by the Political Department (POL) and other sources which support VERIFIN as the Designated Laboratory in Finland. Since 2007, a considerable part of the research is reported to have been funded through the training budget. Prior to 2007, the research costs are not reported due to the previous time reporting system that did not separate the source of funding of the research. Based on a request from the MFA, VERIFIN started to use a time management programme (SOLE TM) to keep records on working hours spent for ODA-funded activities (training and research).

Since 2007 the topics of the research projects are described in the Project Documents and their percentage of the costs from the training project is estimated. However, it seems that defining the funding source for the research has depended on the availability of funding from other sources: The draft Project Document 2011-13 (MFA 2010c, p 12) states: "Some of these (research) projects are mainly financed by external sources. Those parts not financed by an external source could be included in the training project. Which research activities are included in the training project will be agreed on annual basis."

Justification for research as given in the Project Document can be divided into two:

- (1) VERIFIN is required to be a designated laboratory in order to give training related with CWC; and
- (2) Development of new analysis methods may lead to additional training

The first justification clearly links the Research to CWC implementation and funding to the Political Department. The second justification of research projects has led to several projects consisting of development of new analysis methods for CWs.

The annual disbursements and divisions of funds between POL-project and ODA-funds vary greatly. Some costs of POL-project (research) have been included in the training budget (ODA) and they vary from 30% to 50% annually. For example, in

2008, €52 468 of POL-project was funded from the ODA-training budget. The aims of the POL-project or other research projects are not described in the project documents or reports. It seems evident the research has not been planned to respond to the training demands of the developing countries. The team has the impression that the research has been funded through ODA funds when other sources have not been available. In other words, general principles of analytical chemistry are the main areas in the Basic Course, so it is questionable how much it benefits from research of sophisticated methods in CW analysis.

2.5 Statistical Data on the VERIFIN Training

This evaluation focuses on the last ten years of implementing the VERIFIN training programme with the specific focus on courses funded entirely from the MFA Development Cooperation Funds (ODA). Table 3 gives an overview of the training volume in the various categories.

Table 3 Participants in VERIFIN courses 2000-2010.

Year	Funded 100% by MFA ODA funds			OPCW + MFA ODA	
	Basic	Advanced	NACD	Workshops	BACC
2000	4	4	0	0	-
2001	4	4	0	0	-
2002	4	4	8	0	-
2003	4	4	15	13	-
2004	8	0	15	9	-
2005	3	4	11	15	-
2006	4	4	16	20	-
2007	4	4	13	21	-
2008	7	0	15	11	-
2009	8	0	15	3	14
2010	4	4	15	11	14
Total	54	32	123	106	28

During the past ten years, 86 trainees have participated in the three-month courses in small annual intakes. The OPCW workshops that VERIFIN has been contracted to arrange since 2003 account for the increasing of the training volume. ODA funds for these workshops are used for costs of trainers and administration. Analytical Skills Development workshops are entirely funded by the OPCW and hence not presented in the table above (117 participants since 2006). Assistance & Protection Courses are also part of the big OPCW training programme and implemented by the Crisis Management Center in Kuopio. VERIFIN provides services to this training with quite a small financial contribution. Therefore these statistics are not included in the table be-

cause it cannot be defined as a genuine VERIFIN programme. CMC has offered training to 93 participants since 2006.

2.6 Funding of the Training

Annual allocation for the VERIFIN training programme from the MFA Development Cooperation budget has been €450 000 on average. Basic Course, Advanced Course, NACD are funded 100% from this budget. Some of these funds have been used for research activities and make new research topics available for trainees. This justification clearly refers to OPCW courses. VERIFIN justifies using ODA funds for research “that it supports development of training material for courses (e.g. ACW-REP and CW-LSE) that are given for the purpose of establishing a designated laboratory in the country and hence being capable of using the latest, sophisticated research methods. The evaluation team would prioritise the ODA funds to be used for training in basic analytical chemistry. However, all training whether funded totally by MFA ODA funds or jointly with OPCW, has been described in the project documents and approved by the MFA as part of the approval of the Project Document. A distinction between ODA-funded training and training through other sources when approving the Project Document would clarify the situation. Table 4 summarises the disbursements during the last three year period of these activities.

Table 4 Summary of the disbursements from MFA-ODA funds (€).

Training programme	2008	2009	2010
Basic Course	90 896,52	100 264,03	57 952,42
Participants	7	8	4
<i>Per capita costs</i>	12 985,22	12 533,00	14 488,11
Advanced Course	1 249,89	170,75	46 266,28
Participants	0	0	4
<i>Per capita costs</i>			11 567
NACD	46 152,05	37 198,48	54 513,94
Participants	15	15	15
<i>Per capita costs</i>	3 076,80	2 479,89	3 634,26
Sub-total training	138 298,46	137 633,26	158 732,64
Research	106 968,52	99 897,40	32 354,23
Administration	181 170,54	239 690,58	202 159,20
Total ODA funding	426 437,52	477 221,24	393 246,07

ODA funding on OPCW courses			
Workshops	37 837,12	5 120,33	19 824,78
Participants	11	3	11
<i>Per capita costs</i>	3 439,74	1 706,78	1 802,25
BACC in SA	3 646,18	18 490,74	17 411,69
Participants		14	14
<i>Per capita costs</i>		1 320,77	1 243,69
Internship	7 718,92	16 271,77	13 611,63
Assistance & Protection (CMC, Kuopio)	699,41	2 669,48	1 543,14
Total other courses	49 901,63	42 552,32	52 291,24

The low disbursement level for the advanced courses in 2008 and 2009 is explained by the fact that the courses had to be cancelled due to insufficient number of qualified applicants. VERIFIN selects participants for Advanced Courses from the Basic Course participants. Hence, sometimes it is difficult to recruit candidates. Two basic courses were implemented instead during those years. The level of ODA funding is a fairly low in the OPCW funded activities (11% in 2008, 8% in 2009 and 13% in 2010 excluding the administrative costs).

It is interesting to compare the amounts of funds used for training vs. research as percentage of the disbursed ODA funds for these categories. Administrative costs are excluded since their share between the training and research are only rough estimates provided by VERIFIN when requested. Table 5 indicates these disbursements and their share in percentage terms.

Table 5 Comparison of ODA funds used for Training vs. Research (€, excluding admin. costs).

	2008	2009	2010
Training	138 298	137 633	158 732
Research	106 968	99 987	32 354
Sub-total; T+R	245 266	237 620	191 086
% of training	56 %	57%	83%
% of research	44%	43%	17%

During 2008 and 2009, almost equal shares of ODA funds were used for training and research. In 2010, the share of research is substantially lower. VERIFIN claims that the research benefits the development of the training contents when the latest results

can be accommodated into the course curricula and materials. This is true for the short courses aimed at passing the proficiency test and achievement of national designated laboratory status based on the agreements with the OPCW. ODA funded Basic and Advanced courses deal with basic analytical chemistry and not with the sophisticated research methods related to new chemical warfare agents.

Another interesting feature of the disbursements is the high share of administrative costs of the total disbursements of ODA funded activities: 38% in 2008, 46% in 2009 and 45% in 2010. The summary of financial disbursements provided for the evaluation team by VERIFIN did not break the administrative costs according to different training programmes, because their accounting system does not make this separation. However, it is likely that the student related work load for administration is much bigger than that for the research. VERIFIN gave rough estimations of the administrative costs divided between each training programme at the request of the evaluation team. The following approximate percentages were given:

- Basic Course 15 % of the total administrative costs
- Advanced Course 15% of the total administrative costs
- NACD 25% of the total administrative costs
- OPCW workshops 30% of the total administrative costs
- Internship and BACC 11% of the total administrative costs
- Assistance & Protection 2% of the total administrative costs

The unit-cost of training is also an indicator for analyzing the cost-efficiency. The number of trainees in Basic and Advanced courses are four trainees per course annually. The duration of these courses has varied between four and three months (Table 6).

Table 6 Unit costs of the training funded entirely by ODA funds (€).

Training Programme	2008	2009	2010
Basic Course			
- Salaries + student costs	90 896,89	100 264, 03	57 952,42
- Admin. costs 15% of total admin. cost	27 175,50	35 953,50	30 323,85
Sub-total	118 072,39	136 217,53	88 276,27
Number of trainees	7	8	4
Cost/trainee/Basic Course	16 867,48	17 027,19	22 069,06
Advanced course			
- Salaries+student costs	N/A	N/A	46 266,28
- Admin. costs, 15% of total admin. cost			30 323,85
Sub-total			76 590,13
Number of trainees	0	0	4

Cost/trainee/Advanced			19 147,53
NACD			
- Salaries+student costs	46 152,05	37 198,48	54 513,94
- Admin. costs, 25% of total admin. cost	45 292,50	59 922,50	50 539,75
Sub-total	91 444,55	97 120,98	105 053,69
Number of trainees	15	15	12
Cost/trainee/NACD	6 096,30	6 474,73	8 754,47

If this basis for estimating the percentage share of administration costs for the various courses is correct it shows that the administrative costs are quite high. One explaining factor is the rent of space that is charged by VERIFIN accounts for approximately 50 % of the administrative costs.

The unit costs increase with the small number of trainees. The OPCW workshops require quite a lot of administrative work, because they account for approximately 40 % of all administrative work of VERIFIN financed by ODA. The evaluation team questions the justification for using ODA funds for administrative costs of the OPCW workshops.

2.7 Coordination and Cooperation with OPWC and other Stakeholders

VERIFIN cooperates with the OPCW International Cooperation Branch in training. It has implemented many workshops since 2003 with the OPCW funding. VERIFIN offers also placements for the OPCW Internship Programme. Six internship participants have undertaken research in VERIFIN. The BACC course in South Africa is jointly implemented by VERIFIN and the International Cooperation Branch of the OPCW as part of OPCW's Africa Programme. VERIFIN contributes to this training through planning, trainers and course material.

VERIFIN has had a long-standing cooperation arrangement (since 1989) with the Swiss Spiez laboratory in research in the area of sample preparation methods. The results of the research are reported as having impacted on the contents of the training.

3 KEY FINDINGS

3.1 Overall Progress in Project Implementation

3.1.1 Project Concept and Scope

VERIFIN training has been implemented since 1990. The training concept and scope have remained more or less the same over the 20 years. The main policy framework and justification of the training since the beginning has been defined in the CWC Article XI which stipulates:

- The provisions of this Convention shall be implemented in a manner which avoids hampering the economic or technological development of State Parties, and international cooperation in the field of chemical activities for purposes not prohibited under this Convention including the international exchange of scientific and technical information on chemicals and equipment for production, processing or use of chemicals for purposes not prohibited under this Convention (para 1).
- The summarized main message under paragraph 2 is “that the State Parties shall have the right, individually or collectively to conduct research to develop, produce, acquire, retain, transfer and use of chemicals in the field of chemistry for industrial, agricultural, medical, pharmaceutical or other peaceful purposes.”

MFA has had a long-term commitment to support realization of the Convention’s Article XI in the developing countries in a way that all ODA recipients in the world (OECD DAC) are eligible for the training. The funds for the training have been allocated from the ODA funds. The main purpose of using ODA funds for training has been to provide capacity building for the developing countries in order to enable them to fulfill the Article XI requirements. In our view this has been the strength and the weakness in the training concept and scope.

Training is also given under the Article VII to support the National Authorities to prepare the Annual Declarations to the OPCW.

Strengths of the training concept and scope:

- The CWC has guided the focus of the training, defining institution-based training in Finland for selected individuals from the eligible group of countries as the most effective way to deliver training.
- Training has been given in a laboratory that has the best grading as a designated laboratory in the world, with a high-level technical capacity (instruments and the professional staff) securing the high competence level.
- Small intakes of students have secured an individualized learning environment and most likely produced good learning results.
- Hands-on training method has reinforced the theoretical and has contributed to the learning results.

- In short the training has served the purpose of the CWC requirement of the Article XI.

Weaknesses:

- In fulfilling the Article XI requirements, the training has led to a supply-based training concept in which the availability of a high-level training facility has determined the training scope and modality. Analysis of the training needs of the highly diversified set of developing countries has not occurred, which eventually would have led to a more demand-based training concept and modality.
- Even though the funds for training have been allocated from the ODA funds from the ODA budget, the goals and principles of development cooperation have not guided the formulation of the training concept and modality. This has been intentionally expressed in the Development Policy Department's Project Description paper (12.06.2008) where it is stated that the MFA Guidelines for Programme Design, Monitoring and Evaluation (MFA 1997 as revised in 2001) are not used in this intervention.

3.1.2 Programme Planning

The Unit for the Arms Control, Disarmament and Non-Proliferation (POL-20) within the Political Department has been the responsible body for the governance and administration of VERIFIN, which has a dual role in CWC; (1) the National Authority on behalf of the Political Department and (2) organizer of the training programme with the funds from the Department for Development Policy.

VERIFIN has been assigned to implement the CWC related training through Direct Contracting without a tendering procedure. This state of affairs is most likely related to VERIFIN's role as the National Authority and Designated Laboratory which is linked to the legislation on CWC implementation in Finland. VERIFIN has been a strong expert institution contracted to implement the CWC and give advisory services to the MFA, Political Department. Therefore, the training from ODA funds has played a secondary role in VERIFIN in relation to the MFA. Hence, the training programme, even though funded through ODA funds, has not been considered a Development Project and the strict rules of development project planning and reporting have not been followed. As a result, VERIFIN itself has prepared the Project Documents for the three year periods. These have been approved by the Board of Directors for VERIFIN and submitted to the MFA Quality Group for opinion and recommendation before final approval and allocation of the funding frame for the concerned periods even though the project documents have not included budgets for the three year periods. The standard text in the three recent project documents has been: "The budget is accepted by the Board of the VERIFIN. The budget will be submitted to the Ministry after it has been accepted by the Board of VERIFIN."

This explains why the Project Documents to a great extent are descriptions of what courses are planned, and emphasizing the contents of the training. A logical frame-

work approach has not been used in planning the training. Defining the overall objectives, project purpose, results, activities and indicators at all levels would logically connect them within a hierarchical system allowing effective monitoring of the results and impact of the training. The Project Documents are very similar year after year with only minor changes in the course contents and methods based on feedback from the trainees (MFA 2002; 2005; 2006; 2008; 2010c). Scope and training modality have remained the same. However, it needs to be kept in mind, that the VERIFIN staff has not been requested to use the MFA Guidelines for Programme Design, Monitoring and Evaluation.

The planning procedure seems to have been based on the status quo situation; training has become a permanent structure within the VERIFIN over the past 20 years, not a development project. Hence, the project planning system has been a documentation of the annual course programme.

The Project Documents' readability from the ODA point of view should be improved by making clear distinctions between courses funded 100% by ODA (i.e. Basic, Advanced and NACD) and OPCW funded workshops (with joint ODA funding). Separate chapters in the Project Document should be presented on the two types of training and the allocated funds from OPCW and ODA clearly expressed. Assistance and Protection courses implemented by the CMC in Kuopio (with OPCW funding) should not be presented as part of the VERIFIN training programme; preferably CMC should be mentioned as a cooperation partner in training.

3.1.3 Implementation and Management

Organisational Structure

The administration of the VERIFIN consists of Director, Training Coordinator and one secretary who are responsible for the coordination and administration of the organization. The Director and the Training Coordinator have other responsibilities as well. Instructors also participate in the administration of the courses where they teach.

In addition to the logistical arrangements like accommodation, payments of per diems and health care services the staff arranges a social programme for the participants to enhance their well-being in Finland.

Student Selection

VERIFIN criteria for the student selection are;

- suitability of the professional experience for the training programme;
- possible involvement with the National Authority;
- homogeneity of the group in regard to their academic and working experience;
- command of English language;
- equal distribution of gender, if possible; and
- equal geographical distribution.

VERIFIN has emphasized the sufficient academic and professional experience of the applicants in the selection. Out of 54 respondents 23 were at BA level, 23 at MA level and 6 at PhD level and the remainder at diploma level. Equal gender distribution has been targeted and the average percentage is 31% of females during the last decade. VERIFIN has no control over applicants but has made an effort to increase the number of females in the courses e.g. through improved accommodation facilities. Geographically the trainees have represented all continents with slight overrepresentation from Africa.

The Progress Report, 2008-2010 states that from 2009 onwards the selection will put more emphasis on sustainability of the knowledge and capabilities in various countries which would actually mean giving more training to certain laboratories to develop them into self-sustaining units (Söderström & Vanninen 2011). Equal geographical distribution criteria for selection is somewhat contradictory to this, but the report states this as an aim for the future, not as a result of the revised selection. It remains unclear how this criteria has been used in the selection in 2010 and 2011.

Selection to the OPCW partially funded courses is done by the OPCW itself and approved by VERIFIN. Applicants are interviewed over the phone in order to assess their suitability and also their command of English. Some of the trainees in these courses have come from the non-eligible countries using other sources of funding.

Implementing Training

During the last three year period (2008-2010), six instructors have implemented the training programme. Their training has focused on the areas where they have undertaken research and gained scientific expertise. The training is given primarily in a two-way modality: (1) Theory and (2) Practice.

Lectures by external lecturers have been given in specific topics, e.g. on legal issues on national implementation of the CWC given by the legal experts from the OPCW in the NACD Course, and on the new electronic declaration tool (EDNA) developed by the OPCW and other issues related to the inspection given by the Verification Division from the OPCW. A representative from the Development Policy Department of MFA has given a presentation of the Finnish Development Policy in 2010 in the Basic and NACD courses as a pilot initiative. Based on the positive feedback the lecture will be included in the future courses.

Course Material

The instructors prepare and distribute the course material which is given mainly as paper copies and also as a CD-ROM (Basic, ACW-REP, BACC, NACD and CW-LSE II courses). The evaluation team analysed the course material of the Basic and Advance Courses, BACC and partly NACD and the key findings were:

- *Course material* (PowerPoint presentations) that is distributed to participants is of very high quality; explicit, informative and easy-to-read. Most of the slides are useful and understandable even without explanation and they can be used as a

handbook in the trainees' home laboratories. Use of VERIFIN'S own authentic quality documents and methods of analysis gives credibility and they are good examples.

- *Theoretical part of the training* is very comprehensive, including sophisticated analytical techniques. Some of the techniques are not available in common analytical laboratories (even in developed countries); however, it seems that these uncommon techniques are mentioned only briefly.
- *The hands-on training* concentrates on sample preparation and analysis for CW compounds where isolation plays an important role. Hands-on training has been highly appreciated by the trainees and the OPCW. This observation has come up in the interviews of the trainees during the field missions, interviews in Helsinki, responses to the e-mail questionnaires as well as with the interviews at OPCW headquarters in The Hague. It is clearly one of the strengths of the VERIFIN training.
- *Content of the training* is clearly focused on analyses of CWs. All examples in written material and in hands-on training seem to be on CWs. It is mentioned that the similar sample preparations and the same instruments can be used to analyse pesticides or other contaminants in environmental samples. However, pesticide analyses are quantitative analyses that are dealt only briefly in the theoretical part.
- Because of many problems related to operations of analytical instruments, the visited laboratories used alternative, less sophisticated methods of analyses, for example thin layer chromatography (TLC). VERIFIN does not teach these alternative, simple methods, but the visited laboratories themselves seemed to be very competent using these methods.
- During the field missions it became evident that troubleshooting, maintenance, quality systems and laboratory management are subjects that should be dealt during training. This suggestion is based on both interviews and visits to laboratories, especially in the least developed countries. As non-operating instruments were one of the biggest problems in Africa it is clear that troubleshooting and even quite comprehensive maintenance training would be extremely important.

3.1.4 Monitoring and Reporting

Monitoring

Monitoring of the progress is done by collecting feed-back from the trainees after each training course using a questionnaire. The focus of the feed-back is on the trainees' views and experience on the training event. Based on this feedback some changes have been made in the training contents and methodology, e.g. increasing the practical training. Hence, monitoring is internal in nature. Monitoring, and supporting the trainees in their work places by giving advice when needed and hence, reinforcing the impact, is not done currently. VERIFIN could study the possibility of utilising various options that information technology would offer for cost-efficient monitoring (e.g. Help Desk, internet). One way of enhancing monitoring data could be sending questionnaires to the Advanced Course applicants to solicit information from them on the usefulness and applicability of the Basic Course knowledge and skills in their work places. Since participation in the Basic Course is a prerequisite for the Advanced Course selection the data can be used in selection and also for impact monitoring.

Feedback given by the trainees after the courses has been overwhelmingly positive, suggesting that the training has been of high quality. Particularly the hands-on training, high-level laboratory facilities and the competence of the trainers are appreciated. Requests for improvements relate to requests of allocating more time on important issues (equipment-specific and/or certain types of analyses). Troubleshooting and maintenance of the equipment was a clearly on important area that needed more attention in the courses.

Reporting

Reporting is done annually and tri-annually, covering general progress of the courses based on the guidelines given by the MFA, Political Department. Overall financial disbursements of ODA funds are reported. A three-year report has also been prepared covering the years 2008-2010 (Söderström & Vanninen 2011). Due to the nature of project planning, the reporting follows the same lines i.e. documenting the events that have taken place during the reporting period. Reports give an anecdotal account of the courses. Reports do not give summarised statistics in terms of participants, gender, geographical distribution, or financial disbursements by training course. As no indicators are provided in the Project Documents, no systematic reporting has been developed. A logical framework approach in planning would have strengthened the reporting. Much of the statistical data in this report has either been prepared by the evaluation team or by VERIFIN at the request of the team.

3.2 General and cross-cutting Issues

3.2.1 Geographic Coverage

All OECD DAC countries have been eligible for the training. VERIFIN has had the equal distribution of the countries as one of the criteria in selection of the trainees. The DAC classifies the countries into four categories from the least developed to the upper middle-income countries. Table 7 describes how the participants have been distributed between the countries representing different levels of economic development.

Table 7 Participants in ODA funded courses from the DAC list of ODA eligible countries 2000-2010.

Course	Least Developed	Other low income	Lower Middle Income	Upper Middle Income	Other*
Basic	15	7	18	17	2
Advanced	10	4	9	9	1
NACD	33	19	26	30	2
Total	58	37	53	56	5

*Malta, Romania, Russia, Switzerland (costs not covered by ODA funds)

Countries are quite evenly distributed between the two lowest income groups and the two middle income groups (95 vs. 109). The least developed countries have not been given preferential treatment in selection of students. This is largely due to the selection criteria of the trainees, which emphasise the suitability of their professional experience and the homogeneity of the groups in regard to their academic and working experience. Those candidates are prioritised whose professional and academic level is sufficient to for the course requirements. This again brings to light the issue of the supply-based vs. demand-based training approach. The dilemma arises from the fact that those countries which are in greatest need of the capacity development in general analytical chemistry would not meet the course requirements. This is an issue to which the previous Mid-Term Review (Kivimäki 2002) also paid attention.

The team also calculated the geographical distribution of the trainees by continent (Table 8). Participants from African countries are somewhat over-represented among the trainees, but it can be stated that the equal geographical distribution is quite well achieved.

Table 8 Geographic distribution of trainees by region.

Course	Africa	Asia	Middle East	Latin America	Europe
Basic	15	8	9	8	5
Advanced	11	7	5	5	2
NACD	32	23	25	17	9
Total	58	38	39	30	16

3.2.2 Gender

Equal gender distribution is one of the selection criteria for the ODA-funded training. This has been difficult to implement due to an insufficient number of qualified female candidates. VERIFIN has given assurance that their intention is to increase the number of females. Unfortunately the annual and/or the three year reports do not give statistical information on the matter. The evaluation team calculated the gender distribution during 2000-2010 from the lists of participants (Table 9).

Table 9 Gender distribution in training during 2000-2010.

Course	Female	Male	Female %
Basic	19	35	35
Advanced	8	24	25
NACD	28	63	21
Total	55	122	31

Table 9 shows that the majority of the applicants have been males, but VERIFIN has selected females in training whenever their qualifications have been sufficient. One restricting factor earlier has been the availability of accommodation for two persons in a room leading to a situation where only a minimum of two females could be accepted to the course.

The interviews of the trainees and the responses to the e-mail questionnaires give the following data on the gender distribution: (1) out of the 30 interviewed trainees in the field visit countries, 16 were females; and (2) out of the 19 respondents to the e-mail questionnaire or interviews in Helsinki, 7 were females (Table 10).

In Malaysia and Mexico the majority of the interviewed trainees were females (6 out of 8 in Malaysia and 5 out of 7 in Mexico).

Table 10 Gender distribution of the interviewed and respondents to e-mail questionnaire by continent.

Continent	Females	Males	Total
Africa	6	10	16
Asia	9	10	19
Latin America	7	6	13
Mediterranean	1	-	1

Even though the numbers are quite small it shows a positive trend in female participation in the training and reinforces the VERIFIN actions in promoting gender equality in the selection of students.

3.2.3 Environment

Environmental issues can be seen as cross-cutting issues, but also as a policy goal in the VERIFIN training. Training in analytical chemistry for the purpose of capacity development in CWC implementation is closely linked to enhancement of capacity in environmental protection. Analytical chemistry is needed in controlling industrial pollution, toxic chemicals in industrial production, pesticides, water and air pollution and waste management. Enhancing the national capacities in these areas is necessary, particularly in those developing countries where foreign investments are increasing and economies are growing fast. Particularly the least developed countries need this training, which was quite apparent during the field missions to Ethiopia, Kenya and Vietnam. VERIFIN training in analytical chemistry is in line with the environmental aspects, but the diversified needs of the countries at different development levels have not been taken into account. Tailoring courses for the country-specific needs has not taken place due to the training concept which focuses on supply instead of demand.

3.2.4 Appropriate Technology

The VERIFIN laboratory has facilities of a high technological level. It is one of the best designated laboratories in the world and undertakes sophisticated research in chemicals that relate to implementing the Chemical Weapons Convention. The training is at a high level of sophistication as well. The question in this evaluation is to assess the possibility of the trainees to apply these sophisticated research methods in their home countries.

Based on the findings of the mission it is evident that availability of high technology equipment has improved over the last few years due to the OPCW equipment donation programme and other donation programmes (e.g. by EU). The issues that came up during the laboratory visits related to unavailability of spare parts, consumables and maintenance services in the least developed countries. In Ethiopia and Kenya the high-level laboratory equipment was not in operation because of these reasons. Enhancing utilization of appropriate technology in the recipient countries would require more attention to be given to training of maintenance and troubleshooting, laboratory management and by giving professional support to the procurement process (e.g. defining specifications properly).

Because of many problems related to operations of analytical instruments, the visited laboratories used alternative, less sophisticated methods of analyses, for example thin layer chromatography (TLC). VERIFIN does not teach these alternative, simple methods, but the visited laboratories themselves seemed to be very competent using these methods. Hence, teaching simpler methods in Finland would not be reasonable.

VERIFIN training is entirely focused on analyses of chemical warfare agents (CWAs), mainly in verification analyses that designated laboratories perform. Screening analyses of chemical warfare agents are trained in Assistance and Protection Courses in different countries.

Verification analyses of chemical warfare agents are extremely difficult, in fact more difficult than a routine quantification analysis of most pesticides. Verification analyses of CWAs are done using the same instruments and similar sample preparation techniques as pesticide analyses. Therefore the knowledge gained in VERIFIN training can be utilized in pesticide analyses, although it does not give a comprehensive training for that purpose.

4 CONCLUSIONS

4.1 Coherence and Synergies

At a global level the VERIFIN training is in compliance with the implementation of the CWC in the developing countries. Particularly the NACD course (started in 2002) that supports implementation of national legislation on CWC and making declarations on the classified chemicals (schedule 1, 2 and 3). The course is targeted to the National Authorities and/or organisations cooperating with them in preparing the annual declarations for the OPCW and is funded totally through the ODA funds. Data collection from the industries and familiarization with the databases are included in the NACD. This training is linked to the Article VII of the CWC.

VERIFIN as the National Authority of the CWC implementation is closely linked with the implementation of Finland's Arms Control, Disarmament and Non-Proliferation Policy. The research in developing sophisticated methods of identifying new chemical warfare agents and the designated laboratory status are indications of compliance and promotion of Finland's Security Policy. The Political Department finances the VERIFIN institution as the National Authority. Research is funded by the Political Department of MFA and also from the ODA funds. MFA has approved the financing system.

Development cooperation funds by definition should be used for promoting the Finnish Development Cooperation Policy Goals. Clearest compatibility with the Finnish development policy and the VERIFIN training programme is with the MDG Goal 7: Ensure environmental sustainability. The training contents emphasise analytical chemistry that is relevant to chemical weapons and utilizing the methods for environmental protection is a secondary aim in the training.

The overall Finnish Development Goal of poverty alleviation is not guiding the VERIFIN training programme. The leading policy framework and the basis for training is CWC. Therefore, clear priority on the least developed countries let alone on Finland's long-term partner countries is not evident in the programme design. They have had more or less an equal number of trainees.

A solution to this "policy-wise confusing situation" should be a clear distinction of the training into two target groups and modalities; (1) ODA-funded training targeted for the least developed countries and perhaps prioritizing Finland's long-term partner countries; and (2) Training and research of countries at mid-income level whose main priority is CWC implementation and establishment of a designated laboratory. This training should be funded by the OPCW and perhaps the Political Department.

4.2 Relevance

There are two entry points to assessment of the relevance of the training: (1) CWC requirements; and (2) training needs of the eligible recipient countries:

- Relevance of the VERIFIN training judged by adherence to the CWC has been sound. Its requirements have guided the planning of the course programmes including curricula, course materials and teaching methodology.
- VERIFIN and OPCW have a close cooperation arrangement and the demands of the OPCW on the training are well met. VERIFIN is highly appreciated by the OPCW as the training provider and research institution. CWC Article VI and XI requirements have been taken into account, hence endorsing the relevance of the VERIFIN training programme.
- Training needs of the developing countries have not been the basis for course development. The same training concept and modality is used for participants coming from various levels of economic development. Useful skills are taught and learned but in many cases with limited opportunity to utilize them. Environmental hazards are bigger threats in the least developed countries than the threat of chemical weapons.
- VERIFIN courses have been arranged in Finland for the past 20 years for applicants from all OECD/DAC countries. The contract between MFA, Political Department and VERIFIN specifies the eligible recipient countries as all developing countries (OECD/DAC) in the world and the CWC requirements as sole basis for the training. Hence, Development Policy Department has not been involved in assessment of the relevance of the training concept within the Finnish Development Policy framework. Training has been offered in Finland also for those developing countries (DAC Mid-Income countries) that would have the capacity to train their staff themselves or sponsor their nationals in the training in Finland. Development Policy Goals and principles have not defined the training concept.

4.3 Efficiency

VERIFIN has been an efficiently managed programme in the University of Helsinki. The staff is highly professional and the courses are planned, and implemented efficiently. Students are well taken care of during their studies in Finland (accommodation, health care, social programme etc). Roles and responsibilities of the staff are well defined and the long experience in course management secures that the daily activities are run smoothly.

VERIFIN has been responsible for planning the project documents for the 3-year periods. These are approved by the VERIFIN Board of Directors and then submitted to MFA for final approval. The Development Policy Department and Political Department both make decisions on their funding share of VERIFIN. If the funding level is above €200 000 the Minister for Foreign Affairs makes the final decision. The

training concept and the documents themselves are very similar year after year which indicates that dialogue between the partners has not been result-oriented. The implementation modality implies that VERIFIN has become a permanent training structure within the Department of Chemistry with secured funding.

VERIFIN training is not a project with different phases and pre-defined lifetimes, and in-built monitoring and evaluation mechanism covering the three-four year phases. Direct procurement without any competition and using VERIFIN itself in preparing the next phase are not aligned with the prevailing development project preparation system of the Department of Development Policy. Most likely this situation is the result of VERIFIN's dual role and dual sources of funding from the MFA. CWC implementation requires the establishment of a permanent National Authority, to which task VERIFIN has been assigned and funded by the MFA Political Department. Training is funded through the ODA funds but administered by the Political Department. The interviews did not indicate that the Development Policy Department has had an active role in VERIFIN monitoring.

Assessment of the cost-efficiency of the ODA funds is based on calculating the total and unit costs of the training and contemplating whether more impact could be achieved using other modalities of training with the same amount of funds. The total expenditure for the Basic Course was approximately €200 000 in 2008, €244 000 in 2009 and €118 600 in 2010. If these figures are divided by the number of students the corresponding unit costs were approximately €16 900 in 2008, €17 000 in 2009 and €22 000 in 2010. The courses have been of 3 -4 months' duration with 4 participants in each course. The high costs are partially also explained by high administrative costs where rent of space accounts for about 50%.

The multiplier effect and impact of the training would increase if the training would take place in the recipient country as a capacity development project for the entire laboratory staff instead of training one individual in Finland. Hence, the training would be tailored to meet the country-specific needs. This approach would be more cost-efficient, more relevant, and more demand driven. The number of the countries would eventually be decreased, but the number of beneficiaries in the organization would increase. For example, with an annual average allocation of €200 000 – 250 000, at least three countries in the least developed group could be included with 15-20 participants in each country. The training could be of shorter duration than three months, e.g. 3-4 weeks. In fact, during the field missions (Ethiopia, Kenya) the interviewees expressed in-country training as their priority for the future. There are several ways to promote country-specific training.

The NACD course, which has more participants and is of shorter duration, has lower unit costs, with unit costs ranging from €6 700 in 2008 to €9 500 in 2010. The course is meant for the National Authorities, to support them in implementing the CWC requirement specified in Article VI.

4.4 Effectiveness

One way to assess the effectiveness of the VERIFIN training is to analyse whether the learning results have been achieved. There is no examination system in VERIFIN training, but the trainees themselves assess their learning and its usefulness in their work. Feedback is collected after each course. As far as the satisfaction of the trainees is concerned the training has been very effective. The interviews and the responses to the questionnaires reinforce this observation. The hands-on training method has been highly appreciated by the trainees. The Advanced Course students also undertake a small research project and write a report on their findings. These reports give the instructors feedback on the learning process and results. The overall conclusion is that the training has been beneficial for the trainees and their skills and knowledge in analytical chemistry has improved. Trainees in the workshops funded by the OPCW are examined based on the request of the OPCW. The results of these examinations have been good.

A considerable share of ODA funds meant for training have been spent on research with the purpose of impacting the contents of the training. However, the team could not identify concrete elements in either the Basic or Advanced Course contents or training materials that had been direct results of the research. This is not to deny the significance of the research projects, because they have been at high level, relating to developing analytical methods for new chemical warfare agents. The justification given in the Project Document that “research may lead to training” further reinforces the supply-based approach of the training. The research has contributed more to the OPCW workshops (e.g. ACW-REP) that are meant for the countries aiming to participate in the proficiency test and to establish a national designated laboratory.

The student selection for ODA funded courses emphasizes also the proper level of professional experience and academic qualifications and the most suitable candidates are selected. Groups are made as homogenous as possible in regard to their background knowledge.

One indication of the effectiveness of the VERIFIN training is that some former trainees have been appointed as inspectors in the OPCW. A total of four trainees were reported to work in the OPCW, but the figure could be bigger, because responses were not received from all. Eighteen respondents (out of 54) to the questionnaires reported that they had been promoted in their jobs and the training in Finland had contributed to the promotion.

Effectiveness is also enhanced if the trainees are pre-selected by the National Authority from the laboratories that have cooperation with the NA and a role in CWC implementation. It has not been possible for VERIFIN to cooperate with large number of National Authorities in order to ensure that the “right” candidates are applying and that their skills are used in relevant tasks. This again reinforces the finding that the individual capacity building concept has a weakness in comparison with institutional ca-

capacity development. For example, the National Authorities in Mexico and Panama had not used the pre-selection of trainees in a way that the CWC implementation would have been strengthened. Restricting the number of eligible countries and building cooperation and monitoring mechanisms with the target countries would also enhance the effects of the training.

4.5 Impact

There is a two-fold way to assess the impact of the VERIFIN training; (1) Role in CWC implementation in the home country particularly in cooperation with the NA; and (2) Using the learned skills in the laboratory in the home country and training others in the skills learned.

VERIFIN itself is not involved in follow up of the impact of the training in the recipient countries. This is because the participants represent a large number of countries and there are no contacts with the trainees after the training.

The field missions, interviews and e-mail questionnaires aimed at finding out impact of the training. Most respondents reported having benefitted from the training by describing the skills that they had learned and utilized in their work and having trained others:

1. 38 respondents reported on learning to use the sophisticated equipment in analysis, sample preparation and interpreting the results and 8 respondents reported that they had not used the skills primarily because their work had not been relevant for the training. 54 questionnaires were received, but not all responded to every question.
2. Another area where the trainees had used the skills was assisting the NA in preparing declarations to the OPCW. 38 respondents reported of having used the skills in their laboratories. Still, the field mission findings are somewhat contradictory. For example in Ethiopia and Kenya many instruments were not functioning due to problems with availability of maintenance, spare parts and consumables, despite the fact that the trainees had learned useful skills. The interpretation of this contradiction with the impact is that the respondents reported on the skills that they had acquired, but not how effectively their laboratory was functioning.
3. 38 out of 54 respondents reported that they had trained others in the laboratory where they worked. 12 reported that they had not trained their colleagues. 4 did not respond to the question. Two respondents reported that training was their duty because they work in the university (Uganda and Pakistan). Only one respondent (Belarus) reported that training had been given in a new method and in a quality system.

The interviews during the field mission revealed that the training of others was not based on NA's systematic approach but more on occasional ad hoc advice given to

colleagues. Malaysia had the most systematic approach in training or transfer of knowledge and skills to others.

Wealthier middle-income countries like Malaysia and Indonesia prioritise passing the proficiency test and attaining the designated laboratory in the country. This links the capacity building needs with the CWC implementation. The intended impact of passing the proficiency test had not been accomplished in Malaysia nor in Indonesia. It is evident that the VERIFIN training alone is not sufficient for this aim. Another strategy is needed for support to succeed in the proficiency test, perhaps in-country capacity development on broader basis than just learning to use sophisticated equipment. OPCW has a programme to support the laboratories in attaining the designated laboratory status.

The clearest positive training impact was that the skills of preparing the Declarations to OPCW had improved as a result of the NACD course which relates to CWC implementation.

At the individual level, 20 trainees reported on having been promoted after the training in their working places and four had been recruited to work as an inspector in OPCW. No negative “brain-drain” impact was observed during the field missions.

The training concept itself decreases the possibility of wider impact, because the selection favors qualified candidates (individual impact) not the countries with greatest needs for training (institutional impact). However, it needs to be noted that threat of chemical weapons is not an issue in the least developed countries. Their training needs relate more to environmental protection and analytical chemistry methods for its promotion. Capacity weaknesses in the least developed countries are rather complex, relating primarily to non-conductive laboratory environments (e.g. poor leadership and management and insufficient resources for maintenance, spare parts and consumables). This has led to weak government capacity to enforce environmental legislation.

4.6 Sustainability

National level commitment to development of the capacity in CWC implementation and/or utilization of analytical chemistry in environmental protection and industrial production is a prerequisite of sustainable development. Capacity development has to be complemented by increased government funding and efficient execution of the legislative measures.

It seems that the most sustainable element in CWC implementation is the enhanced capacity to prepare annual declarations for the OPCW. NACD training has brought the intended results.

In other areas of the training the sustainability is challenging because in many countries the National Authorities do not have a strategy of pre-selecting the trainees and

how their skills will be utilized in CWC implementation. For example, in Panama, as the government had changed after the national elections, there was no transfer of information for the new NA, and in Mexico when the NA had been changed from one ministry to another, the information transfer had not happened. The evaluation team had to provide the Mexican NA the names of their former trainees.

Insufficient government funding for the laboratories, weak laboratory management, weak government capacity to endorse the environmental legislation are factors that weaken the sustainability of the training results. Availability of high-level equipment no longer seems to be a major problem area due to donations from OPCW and other sources.

Sustainability should be enhanced by broadening the training concept from training individuals to institutional capacity building. This would mean tailoring the capacity building to respond to the national needs and providing capacity development in the recipient countries. Identification of locally available resources (e.g. universities) and cooperation arrangements in capacity building would enhance the sustainability.

Most of the trainees who responded to the questionnaires are still working in the same laboratories that sent them for training and quite a few of them have been promoted after the training (see para. 4.6 Impact). The training material from the VERIFIN courses had also been given to the trainees, which enhances the sustainability of the learning achievements at the individual level.

4.7 Coordination, Cooperation and Complementarity

OPCW is the closest partner of VERIFIN. Expansion of the VERIFIN training programme in 2003 to include short workshops has taken place because OPCW finances partially these programmes. VERIFIN also participates in OPCW's Internship Programme by offering places for the interns (six participants), and in expert assistance visits that are linked with the OPCW laboratory assistance programme. Two expert assistance visits have been undertaken so far (Ethiopia and Malaysia). The visit to Ethiopia was highly appreciated by the Ethiopian partner and more, similar support was expected. The BACC course in South Africa is jointly implemented by VERIFIN and the International Cooperation Branch of the OPCW as part of OPCW's Africa Programme.

CWC-related training offered by other institutions has mostly been one-off provisions and no long-term partnerships have been formed between VERIFIN and institutions from other Member States.

Research is an area where VERIFIN has had long-standing cooperation arrangements; e.g. with the Swiss Spiez laboratory since 1989 in the area of sample preparation methods. The results of the research have impacted on the contents of the VERIFIN training.

4.8 Value-added

The most substantial value-added feature of VERIFIN is the long-term commitment to providing training for the Member States in the developing world. Throughout the 20 years VERIFIN has gained experience and expertise in training and research. OPCW and the Member States have learned to rely on the availability of the training in Finland.

4.9 Findings in Relation to the Evaluation Questions of the TOR

The TOR delineates a set of evaluative questions into six broad topics. The Evaluation Team presents its findings in relation to these questions in table 11 and also highlights their relation with the corresponding evaluation criteria for the purpose of cross-checking that the TOR requirements are fulfilled. Assessment of the evaluation criteria is presented in sections 4.1 – 4.8.

4.10 Follow-up of the MTR recommendations

- i. Enhancing complementarity with other programmes (funded by other partner countries) in capacity building;
 - Very few projects have existed in support of CWC implementation - only some one-off training by other universities. VERIFIN complements the OPCW funded Internship Programme, Africa Programme by the ICB in OPCW and Laboratory Assistance Programme of the OPCW with Expert Assistance Visits.
- ii. Enhancing gender balance in student selection;
 - VERIFIN has actively promoted gender equality in the selection of trainees which was verified during the Field Missions.
- iii. Considering probably more the political objective in the selection of countries from which trainees are selected, recognizing the discrepancy stemming from the fact that the absorption capacity is weakest in the poorest countries (priority in the Finnish Development Policy) and hence having the greatest need of training vs. countries that can utilize the skills due to higher level income (Mid-Income countries) and better material and human resources;
 - Country selection has not prioritized the poorest countries. CWC has provided the major framework for country selection.
- iv. Improve information exchange between VERIFIN and other ministries including a proposal of strengthening the communication between the Finnish Embassies in the developing countries and the National Authorities;
 - This has not been done due to the large number of eligible countries and small number of participants/country in the training.

Table 11 Findings in relation to the Evaluation Questions of the TOR.

Topic of the question	Specific questions under each topic	Main findings	Relation to the Evaluation Criteria
<p>1. VERIFIN training</p>	<ul style="list-style-type: none"> • Has the organizational set up of VERIFIN been suitable for the specific training in the chemical warfare agents of the Convention, targeted to the representatives of the developing countries? • Has the working modality of organizing the courses mainly in Helsinki been conducive to transferring knowledge and practical skills which can be put into practice in the home institutions of these trainees? • Is the training material adapted to the technological level of the institutions of origin of the trainees? • Has the scope of implementing VERIFIN training been responding to specified needs in terms of geographical coverage? • What are the criteria and the selection process of the trainees? • What is the distribution of trainees between the Least Developed Countries and other developing countries, and disaggregated between the genders? 	<ul style="list-style-type: none"> • VERIFIN organizational structure responds well to the requirements of the training for the CWC implementation in general • Helsinki-based training modality does not respond well to the institutional needs of the diversity of developing countries • Training material responds to the CW requirements. Technological levels of the institutions are not taken into consideration. However, many developing countries have high-level equipment through donations. The equipment is often out of order due to insufficient funds for maintenance and spare parts. • The training is quite evenly distributed between the continents with slight overrepresentation from Africa. • VERIFIN selects the candidates with the main criteria of suitability of the professional experience, involvement with the NA, homogeneity of the group with their academic and working experience, equal gender and geographical distribution • Least developed countries represent 28% of all participants and females 31% of total participants in training. VERIFIN has actively tried to enhance the female representation in the courses. 	<ul style="list-style-type: none"> • Relevance

	<ul style="list-style-type: none"> • Has the training curricula been developed over the years? Who decides and designs the contents of the curriculum and training materials? Do former trainees have any role in the development of the course contents? Is the duration and sequencing of the trainings optimal? 	<ul style="list-style-type: none"> • VERIFIN staff has developed the curricula and the training materials. Trainees give feedback after the training and more practical, hands-on training has been included based on the feedback. VERIFIN claims that the research contributes to the contents of training, but this has more to do with the OPCW courses that aim at proficiency test rather than the ODA funded Basic and Advanced Courses. The trainees are selected based on their qualification level and hence the duration of the training has been sufficient and the learning outcomes have been good. Shortening Basic and Advance courses to three months due to visa issues was a practical solution. 	<ul style="list-style-type: none"> • Effectiveness
	<ul style="list-style-type: none"> • Is post-training monitoring carried out for the purpose of developing further the training programme or modules or to assess the usefulness of the training in practice, work, career advancement of the trainees, and the host institutions? and countries abilities to comply with the convention obligations? 	<ul style="list-style-type: none"> • There is no post-monitoring in place 	<ul style="list-style-type: none"> • Relevance and Sustainability
<p>2. VERIFIN governance</p>	<ul style="list-style-type: none"> • How has the current independent institution developed over the years? • Have the changes been beneficial to the ability of the institution to deliver its training objectives? What is the share of the training in the overall activity of the institution (although the evaluation looks only at the ODA-funded component)? 	<ul style="list-style-type: none"> • VERIFIN has merged into the Department of Chemistry in the beginning of 2010. Since 1994 up to 2009 it was an independent institute of the University of Helsinki. • Cooperation with the Department of Chemistry and availability of the excellent facilities of Kumpula Campus are conducive for scientific research. Training has remained an independent activity implemented separately from the university. • Training funded by ODA funds accounts for 20% of VERIFIN's total budget, as compared with the 27% funded through the Political Department. The rest of the budget comes from other sources (other projects, Swiss Spiez laboratory and the University). 	<ul style="list-style-type: none"> • Efficiency

	<p>How is the decision-making on the training programme and the selection of the trainees made? What is the role of the Ministry for Foreign Affairs in this regard? What is the role of the Finnish Development Policy priorities?</p>	<ul style="list-style-type: none"> • VERIFIN makes the decisions on the training programme and selects the trainees. MFA has funded the training and approved the training plans made by VERIFIN. Finnish Development Policy priorities have not been visible in the planning because of the emphasis on the CWC implementation. The Political Department of MFA is responsible for VERIFIN supervision. Department of Development Policy has not had a visible role in VERIFIN. 	Efficiency and effectiveness
	<p>Are the resources in terms of ODA financing and the staff adequate to fulfill the objectives and purpose of the VERIFIN training? How is the ODA attributed to cover only the training of developing country participants?</p>	<ul style="list-style-type: none"> • ODA funds and the staff are sufficient to implement the training programme. On the other hand, the unit costs are quite high in the Basic and Advanced Courses due to small number of participants (4/course). Cost-efficiency is an issue in the current training concept. All DAC countries are eligible for the training, hence the least developed countries are not prioritized in the selection. 	Cost-efficiency
<p>3. The wider political context</p>	<p>What is the effect of the VERIFIN training in the context of global disarmament and non-proliferation of chemical weapons as well as in the area of assistance and protection? What are the views of the stakeholders, the Ministry, OPCW, trainees, countries of the recipients in this regard?</p>	<ul style="list-style-type: none"> • VERIFIN has supported the implementation of the CWC in the developing countries particularly through the NACD course. VERIFIN does not implement the Assistance and Protection course itself, but has contributed to some extent in planning and implementing the A&P course in Kuopio. • MFA, Political Department and the OPCW appreciate highly VERIFIN training for CWC in developing countries. In addition, its role as the National Authority in Finland and Designated Laboratory supports MFA in CWC implementation. • Chemical weapons are not an issue in most developing countries. Field visit countries would appreciate country-based training, focusing more on national priorities, particularly environmental issues. 	

4. Other players in the field	What are the roles of the OPCW and other donors, such as Protechnik laboratory in South Africa? Are there similar institutions elsewhere and if so, how does VERIFIN compare with the corresponding bodies? Is there a possibility for cooperation or network modalities?	<ul style="list-style-type: none"> • VERIFIN cooperates closely with the OPCW and implements several workshops jointly funded by the OPCW and MFA. VERIFIN participates in the BACC course in South Africa in planning and implementing. VERIFIN also implements one workshop that is funded totally by the OPCW/ EU. • There are no similar institutions that offer regular training. Only a few one-off courses have been arranged by other institutions. No other member state is funding regular training on CWC. 	Coordination and cooperation
5. The National Authorities level	Is there a mechanism of assessment of technical preparedness of the host institutions to receive a VERIFIN trained person, who will into practice the skills he/she has learned? Does the host institution's level of preparedness affect in any way the selection of the trainees?	<ul style="list-style-type: none"> • VERIFIN selects the trainees from the eligible countries and does not have the opportunity to assess the National Authorities' commitment and capacity in CWC. The countries vary greatly in this respect. The National Authorities are mainly responsible for preparing the declarations of scheduled chemicals to the OPCW and in this aspect the VERIFIN training has contributed a lot on the capacity of the NAs. Some NAs are not efficiently linked with the laboratories and have a minimal role in the selection of the candidates let alone assigning them for relevant work. 	Effectiveness
	Do the National Authorities selectively utilize the trained personnel in issues pertinent to the Convention and fulfilling of the obligations towards the Convention or do the trainees return to their "ordinary tasks" in their home institutions? Is there any specific planning scheme among the National Authorities to apply for traineeships for a special purpose, or is the application ad hoc or individually based?	<ul style="list-style-type: none"> • Countries vary greatly in this aspect. Some Mid-Income countries (like Malaysia) that have a plan to pass the Proficiency Test and accomplish a designated laboratory have a strategy of sending trainees and utilizing their skills. Many other countries particularly among the least developed group have other priorities than CWC fulfillment. There the trainees come from many types of laboratories and they return to their "old jobs". Applications can be individual or ad hoc (like in Mexico and Panama) but also selected by the NA from environmental laboratories (like Ethiopia). 	Impact
6. Multiplier level	South-South cooperation-has it worked and if so, what kind of mechanism has been used? Does VERIFIN have a role in this regard? Are there examples of in-country or inter-regional multiplier training by trainees taking place?	<ul style="list-style-type: none"> • There was no evidence of south-south cooperation apart from the BACC in South Africa. VERIFIN participates in BACC. It seems that the OPCW has not taken an active role in this aspect. 	Cooperation

- v. VERIFIN training to be utilized in development of South-South communication and regional cooperation;
 - The training concept of giving all training in Finland does not promote South-South cooperation. Regional cooperation is implemented through the OPCW funded BACC programme where VERIFIN plays an important role in planning the training and as trainer.
- vi. VERIFIN training could be utilized more efficiently in promoting Finland's "image policies".
 - Finland's image in OPCW and in the Member States that have participated in the training is very good.

5 RECOMMENDATIONS

Preamble

VERIFIN's professional expertise and experience in training and research are highly appreciated by all partners, including OPCW, Member States, National Authorities and former trainees. Alignment with the Finnish development policy is an aspect to be emphasized more when ODA funds are used. During the 20 years of implementing VERIFIN training for a large number of countries, the training concept has not been questioned. As a result training in Finland has become a permanent modality where fully sponsored training is offered whether there is an actual demand or not.

Therefore, the recommendations suggest separation of the training directly linked to CWC from the training with broader development aims.

Recommendations

- (1) Divide the training into two categories; support to CWC implementation and to development cooperation:
 - i. Training that clearly aims at strengthening the implementation of the Chemical Weapons Convention, e.g. training of the National Authorities for the CWC requirements and short courses and research aiming at supporting the Member States attaining the designated laboratory should not be funded through the ODA funds. These workshops/short courses can still be arranged at VERIFIN premises in the University of Helsinki, but funded by the OPCW. OPCW does not have a strategy to increase the number of designated laboratories in developing countries, but it supports the member states that request assistance from the OPCW for attaining the designated laboratory status. The NACD course could continue as VERIFIN training in Helsinki using ODA-funds due to its proven positive impact on the developing countries, including the least developed countries. It also promotes good governance and anti-corruption, which are part of the Finnish Development Policy Goals.

ii. ODA funds should be used for capacity building in analytical chemistry in the selected least developed countries which would align the training with the development cooperation policy goals. Still, the link with the CWC would come from the selection of the targeted laboratories in these countries. In most developing countries the national priorities are environmental issues, like polluted water, air, industrial pollution, etc.

- (2) Finance the research through funds from the Political Department, MFA. Research undertaken by VERIFIN can also roughly be divided into two categories; (i) Research that is meant for VERIFIN itself to maintain its status as the designated laboratory with the highest ranking; and (ii) sophisticated method development related to analyses of CWAs, for example new CWAs, new sample matrices or new analytical methods.

The research promotes the CWC implementation and is not the priority of the countries at lower socio-economic levels. The funding source should be from MFA/Political Department, not ODA funding.

- (3) Design a development project/s under ODA funding for capacity development in analytical chemistry. Enhancement of impact, relevance and development policy alignment and promoting cost-efficiency would require restricting the number of countries and putting priority into the **two least developed countries category** (DAC classification). In case there is a profound justification from the development policy point of view a country can be included from the mid- income level group into the capacity building project (e.g. a prospective country for training other countries in the region). A new project should be designed for 2-3 countries to be assisted for a period of 1-2 years. The funds used for Basic and Advanced training courses should be transferred to projects aiming at capacity building in analytical chemistry in the laboratories that are cooperating with the National Authorities. Hence, the improved capacity would also serve the CWC requirements. The current modality of Basic and Advanced courses implemented in Finland should be phased out during 2012 and a new project (with the title e.g. Capacity Enhancement for Laboratories in Analytical Chemistry in Sub-Saharan Africa) planned during the phasing out period. This approach would move away from the concept of training individuals to institutional capacity building. The training and capacity development for country-specific needs would be given in the laboratory of the selected country.

In the first phase this capacity building modality should be designed as a pilot project and the countries that would participate could be the ones where OPCW funds laboratory assistance programmes and/or Finland's long-term partner countries to promote synergy benefits. Africa should be the continent in first phase to pilot this modality (e.g. Ethiopia, Zambia, Kenya, Tanzania, Mozambique). During the average project lifetime of three-four years, 4-6 countries could be covered.

The Guidelines of the MFA Procedures in Project Design should be used, and an independent planning team established for preparation of the Project. Tendering for the implementing agency and expert services is also part of the MFA procedure. If the direct procurement is to be used in the future, its legal justification should be explored by the legal experts of the MFA. This is due to the fact that direct procurement is not commonly used above a certain funding level. Nonetheless, it would be vitally important to make use of VERIFIN's expertise in the future projects.

- (4) Use complementary aid modalities to bring in synergies. It is assumed that the funding frame will remain at the existing level hence other sources for funding should be identified to complement the project of Capacity Building in Analytical Chemistry:
- MFA's upcoming Masters Scholarship Programme could be linked to this project by offering scholarships for selected laboratory staff members in recipient countries that would participate in the project;
 - Twinning arrangements between Universities in Finland and the selected partner universities in the developing countries could also strengthen the capacity exchange and development;
 - Utilising the ICI-instrument could be one possible complementary aid instrument (SYKE) could be a possible partner organisation);
 - It would be worthwhile also to explore the possibilities of the MFA North-South-South University Network Programme linking with the project in the selected countries.

Complementarity measures would considerably enhance the funding and eventually lead to more sustainable capacity building, if carefully built into the Project Design.

The OPCW laboratory support programme and Equipment exchange programme would be self-evident partners and would enhance the impact of the project.

It is important that the professional expertise and experience that VERIFIN has acquired over the past 20 years would be utilized in the future institutional capacity development project. VERIFIN could coordinate, and provide expert and consulting services for the project.

VERIFIN's legal status as the National Authority and the designated laboratory will remain and this would form a linkage between the CWC and a development project.

- (5) Support to existing regional networks in analytical chemistry. Opportunities to support existing cooperation networks in analytical chemistry should be explored, e.g. Eastern and Southern Africa Laboratory Managers Association

(E-SALAMA) established in 2001 has organised regional conferences since 2002. VERIFIN could provide expert services to these types of networks and hence promote sustainability.

- (6) Strengthen the dialogue between the Development Policy Department, Political Department of MFA and the VERIFIN in all aspects of the ODA funded training in CWC. Guidance from the Development Policy department on planning, management, monitoring and reporting should be enhanced. If the MFA Guidelines for Programme Design, Monitoring and Evaluation (with the log frame) had been used in planning it would have helped VERIFIN to report against results and indicators. The Political Department's main responsibility as the contractual partner with VERIFIN has been the CWC and its legal requirements. As far as development cooperation is concerned its role seems to have been management of the ODA funds on behalf of the Development Policy Department.

6 LESSONS LEARNED

The dual role of VERIFIN and its dual funding sources have led to a situation where a single training modality has tried to fulfill simultaneously two sets of policy demands, which both would require different types of approach. Hence, the principles of development cooperation have not been adhered to sufficiently in the VERIFIN training concept and modality.

The lesson learned from this state of affairs is that VERIFIN should have received more guidance from the Development Policy Department in planning the training programme. This should have been stronger particularly after the Mid-Term Review that was undertaken 10 years ago. This inter-departmental project would have needed a sound inter-departmental instrument for dialogue and policy guidance. Perhaps this type of cooperation project that crosses the organizational boundaries is rare in the MFA organisation and hence, the role of the Development Policy Department has remained unclear. Evidently the Quality Group of the MFA has not been a sufficient instrument for supervision of this type of joint undertaking.

REFERENCES

346/1997 *Laki kemiallisten aseiden kehittämisen, tuotannon, varastoinnin ja käytön kieltämistä sekä niiden hävittämistä koskevan yleissopimuksen eräiden määräysten hyväksymisestä ja sen soveltamisesta annetun lain muuttamisesta*. Given 14.11.1997.

MFA 1997 *Guidelines for Programme Design, Monitoring and Evaluation*. Ministry for Foreign Affairs of Finland, Uusimaa Oy, 79+ p. ISBN 951-724-160-7.

MFA 2002 *Training in Chemical Weapons Verification 2003-2005*. Project Document, Finnish Institute for Verification of the Chemical Weapons Convention, VERIFIN, University of Helsinki.

MFA 2005 *Training in Chemical Weapons Verification-Additional Training Events in 2005*. Project Document, Finnish Institute for Verification of the Chemical Weapons Convention, VERIFIN, University of Helsinki.

MFA 2006 *Training in Chemical Weapons Verification 2006-200*. Project Document, Finnish Institute for Verification of the Chemical Weapons Convention, VERIFIN, University of Helsinki.

MFA 2007 *Development Policy Programme 2007: Towards a Sustainable and Just World Community*. Ministry for Foreign Affairs of Finland, Erweko Painotuote Oy, 38 p.

MFA 2008 *Training in Chemical Weapons Verification 2008-2010*. Project Document, Finnish Institute for Verification of the Chemical Weapons Convention, VERIFIN, University of Helsinki.

MFA 2009 *Afrikka Suomen Kehityspolitiikassa: Kehityspolittinen puiteohjelma*. Ulkoasiainministeriö, Erweko Painotuote Oy, 41 p.

MFA 2010a *Africa in Finnish Foreign Policy*. Unofficial Translation. Publications of the Ministry for Foreign Affairs 8/2010. ISBN 978-951-724-858-7.

MFA 2010b *Development and Security in Finland's Development Policy: Guidelines on Cooperation*. Ministry for Foreign Affairs of Finland, Erweko Painotuote Oy, 20 p.

MFA 2010c *Training in Chemical Weapons Verification 2011-2013*. Draft Project Document, Finnish Institute for Verification of the Chemical Weapons Convention, VERIFIN, University of Helsinki.

Kivimäki T 2002 *Review of Finnish Training in Chemical Weapons Verification*. Evaluation report 2002:7. Ministry for Foreign Affairs of Finland, Edita Prima Oy, 54 p. ISBN 951-724-378-2.

OPCW 2005 *Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction*. Technical Secretariat of the Organisation for the Prohibition of Chemical Weapons, The Hague.

Söderström M & Vanninen P 2011 *Report on Training of Chemists from Developing Countries; Report Period 1.1.2008-31.12.2010*. University of Helsinki, Finnish Institute for Verification of the Chemical Weapons Convention, VERIFIN.

VERIFIN 2010 *Annual Report 2010*. University of Helsinki, Finnish Institute for Verification of the Chemical Weapons Convention.

Ministry for Foreign Affairs of Finland

Office of the Under Secretary of State

EVA-11

Terms of Reference

Training of Chemical Weapons Verification (89803401)

1. BACKGROUND

The Chemical Weapons Convention (*Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction, CWC*) was adopted in Geneva on the 3rd of September 1992 by the 47th session of the Conference of Disarmament. The Convention was opened for signature in Paris on the 13th of January 1993 (Resolution A/RES/47/39, 30.11.1992). The Convention entered into force on the 29th of April 1997.

The Organization for the Prohibition of Chemical Weapons (OPCW) was established in 1997 to be the implementing body of the CWC. As of July 2009 there are 188 States Parties to the Convention. Two of the signatory states (Israel and Myanmar) have not yet ratified the Convention and five states (Angola, Egypt, Democratic People's Republic of Korea, Somalia and Syrian Arab Republic) have neither signed nor acceded to the Convention.

Finland has been actively engaged in the chemical weapons disarmament since 1973, when the Ministry for Foreign Affairs (Ministry) began funding an open research project on technical issues relating to the verification of chemical weapons. This Chemical Weapons (CW) project was implemented by the Department of Chemistry of the University of Helsinki in co-operation with other Finnish laboratories. The Finnish Research Project started with the definite intention to develop methods to identify chemical warfare agents of a high degree of accuracy, to train chemists in the use of these methods, and to develop instruments and specialized laboratories for these tasks.

The Ministry for Foreign Affairs is the supreme National Authority responsible for implementing the CWC in Finland by virtue of law. Article VII of the Convention provides for the establishment of a National Authority to serve as the national focal

point for effective liaison with the OPCW and other States Parties to the CWC. In 1994, the Finnish Institute for Verification of the Chemical Weapons Convention (VERIFIN), an independent institute under the administration of the University of Helsinki, became the required National Authority. It was agreed that VERIFIN shall provide the Ministry with expert assistance in complying with and implementing the provisions of the CWC in Finland.

Finland has fulfilled its CWC responsibilities in international cooperation and assistance by providing financing for the training courses organized by VERIFIN. The costs of the training courses have been covered from the Official Development Assistance (ODA) funds of the MFA and partly with the funding from the OPCW. These training courses have been tailored for experts like chemists, officers from emergency-response units involved in civilian protection and National Authorities from developing countries. Most of the courses have been developed in co-operation with the International Cooperation and Assistance Division (ICA) of the OPCW. The course for Assistance and Protection has been conducted in the Crisis Management Centre (CMC) of Finland and the ICA of the OPCW.

Since July 2010, a total of 572 persons have been trained from 125 countries. In 2009, 86 experts were trained by VERIFIN. The majority of the trainees have participated in the courses in Finland, namely in the Basic and Advanced Courses, Training Course on National Authority and Chemical Databases, Courses on the Enhancement of Laboratory Skills in Analyzing Chemicals Related to the Chemical Weapons Convention (CW-LSE I and CW-LSE II), Assistance and Protection Course, Analytical Skills Development Course and the Course on the Analysis of Chemicals Related to the Chemical Weapons Convention in the framework of the OPCW proficiency testing (ACW-REP).

VERIFIN has planned and participated in training as a trainer in South-Africa in the Basic Analytical Chemistry Course for the OPCW Africa Programme, which was offered at Protechnik Laboratories, Pretoria by South Africa and Finland. VERIFIN has also participated in a training called Expert Assistance Visits (EAV). In addition to contributing to the personal skills development and knowledge of those trained, VERIFIN training has also added to the overall capacity of the developing countries' capacity to comply with their reporting obligations towards the Chemical Weapons Convention.

In addition to training, VERIFIN's main areas of activity are research and methods development. The analytical capability of VERIFIN includes all CWC related chemicals in various types of sample matrices. The VERIFIN laboratory is one of the leading Chemical Weapons Convention laboratories in the world and in 1998 was appointed as one of the official laboratories of the OPCW, the so-called designated laboratory.

In 2010, due to a change in the institutional status of the University of Helsinki, the administrative status of VERIFIN has also changed. VERIFIN was united to the Department of Chemistry under the Faculty of Science. The organizational reform will, however, neither change its independent status nor its functions as a National Authority. The VERIFIN training remains at the heart of the Institute. It is foreseen that the organizational change will improve collaboration, scientific multi-disciplinarity and networking between the Department of Chemistry and VERIFIN. The focus of research in Department of Chemistry is on green and environmental chemistry, the focus of research at VERIFIN being on development of methods for chemical warfare agents (CWAs) and toxins of biological origin in environmental matrices. Moreover, the Department of Chemistry has a strong Teacher Education Unit collaboration which enables development of training given by VERIFIN.

2. THE MID-TERM EVALUATION 2001-2002 OF VERIFIN

An evaluation of the VERIFIN training programmes was launched in late 2001. The evaluation report "*Review of Finnish Training in Chemical Weapons Verification*" was published as Evaluation report 2002:7. The perspective of this evaluation was a mid-term review, looking back and looking forward. The author of the report was Mr. Timo Kivimäki. The evaluation entailed only the ODA part of the VERIFIN training.

The mid-term evaluation looked at a number of issues, those including the adequacy and relevance of the training content, the possible impacts on the countries of the participants, efficiency of use of resources, project administration, programme monitoring, and sustainability. Document review, questionnaires and interviews were used as tools to draw information. The findings of the evaluation were positive in terms of added value of development of analytical skills in the verification of chemical warfare agents. It was concluded that the VERIFIN training had added to the capacity of the developing countries to comply with their reporting obligations, and that training had had many politically attractive consequences.

On the other hand, the evaluation concluded that the impact of the VERIFIN training programme could be complemented by other programmes which address the lacking capacities in other than verification aspects of the Convention compliance. For example, the institution building component of Chemical Weapons Convention, working in tandem or in sequence with the VERIFIN training had the potential of multiplying the effect of the training component. In other words, the dimension of *complementarity* was brought to the fore.

It was recommended that *complementarity and cooperation* should be sought to improve the physical capacities of the trainees' host institutions. Frequently, the lack of appropriate instruments hampered putting the skills and capacities achieved in the training into practice. Moreover, it was noted that the female participants were in the minority among the trainees. It was considered more of a political factor rather than an indication of a lack of basic training or skills by female chemists in the developing coun-

tries. It was recommended that this matter should receive attention in the nomination and acceptance procedure of the courses.

The evaluation also took up the preferred focus on the Least Developed Countries (LDCs), where the need is the greatest, and their applicants. Focus on the LDCs would be in line with the overall development policy of Finland. It was however argued that even if the needs may be the greatest, the institutional capacities to utilize training would be much lower than in somewhat more developed countries.

The mid-term evaluation suggested that the embassies of Finland in the countries of origin of the trainees could be used to *follow up* and *monitor* the usefulness of the training. It was concluded that follow-up would bring about such benefits as closer cooperation with the national authorities. It was recommended that a mailing list should be kept of the former trainees to facilitate the monitoring. In spite of such links to the national authorities responsible for chemical weapons verification, Finland could in a valuable way add to the *needs assessment* aspect at the country level to tailor the training contents around *relevant* topics. Moreover, the positive links could be utilized to influence the selection of the trainees, also in favour of female candidates. When an adequate critical mass of training accumulates in any region, the *South-South cooperation* was seen as one possibility to enhance the ownership of the developing countries of the VERIFIN training and to better identify the institutional and technological constraints that would need to be featured in the training programmes.

3. THE CURRENT EVALUATION

Close to 10 years has elapsed since the mid-term review evaluation of VERIFIN. Thus it is timely to conduct a fully fledged evaluation of the training programme. Due to the long history of the VERIFIN training programmes, this evaluation will focus much on the sustainability and the impact dimensions. In accordance with the current development policy programme of the Ministry, one of the important dimensions will be the sustainability of development interventions, in terms of the economic, sustainability. Even if VERIFIN training is focused on a special topic, the verification of chemical warfare agents, the training modality may also have a wider bearing. This evaluation will examine the impact on the levels of the trainees, the institutions (VERIFIN and institute of the recipient countries), as well as on the national level in Finland and in the recipient countries and at the global level.

3.1. Purpose

The purpose of the evaluation is to update information on the VERIFIN training. The evaluation will offer an external independent view on the different dimensions of the training programme, including the institutional set-up, contents and working modalities of the training programme and its significance in fulfilling the objectives set to VERIFIN at different levels.

3.2. Objectives

The objective of this evaluation is to draw lessons from the past experience of the VERIFIN training for the benefit of planning the future training programmes in order to achieve the best possible impact and added-value. The evaluation will also serve as an accountability tool for the ODA spent on the funding of this programme and to verify the results at the field level.

The *specific objectives*: the evaluation will provide

- a) an external view of how the 2001 - 2002 evaluation results and recommendations have been addressed and taken into account, with specific reference to the possible need to improve the connection, collaboration, and coordination of the VERIFIN training with other players relevant to chemical warfare agents verification and the institutions involved;
- b) an expert assessment of the training modality, its administration and functions, and whether there are possibilities to improve and develop it further;
- c) an advice on how the competences achieved by VERIFIN training could be utilized in the widest possible ways by the participants in the developing countries;
- d) views on the multiplier effect of the training modality, including the South-South dimension.

3.3. Scope

The scope will include all levels of activity of the VERIFIN training, in Helsinki, the OPCW, the National Authorities in the developing countries, and the trainees themselves. After nearly twenty years of the VERIFIN training and experience, it is imperative to launch a fairly comprehensive evaluation, which includes considerably wide-ranging field visits and contacts with National authorities, compliance issues, personal career advancement etc., at different levels in the developing countries.

The evaluation will be sequenced into two phases. The first one will include a thorough analysis of written material, course materials, monitoring reports, the Board of VERIFIN as far as the training is concerned, and decisions, contracts and alike. The document study will result in a concise but comprehensive draft report, which points out in a specific way what are the emerging issues that will need verification and validation in the field. Part of the field sequence of this evaluation will be implemented through carefully designed questionnaires taking into account the specific nature of the target audience. The focus areas of the field visits will include all the major geographical regions of the trainees.

3.3.1 The major levels of evaluation

As stated above in 3.3., this evaluation is intended to look at every level and dimension of VERIFIN training. The major areas of perusal include

- ✓ The training concept and the validity of it after nearly 20 years of experience, with a view to the future;
- ✓ The VERIFIN training programmes' administration, personnel, decision-making systems, selection processes, failure rates, and particular achievements;
- ✓ The OPCW level and other donors' level;
- ✓ The field level in terms of the host institutions of the trainees, administration, trainees, and their career advancement and skills development;
- ✓ Approaches and mechanisms used: are there any participatory mechanisms or approaches employed at the different levels with the aim of enhancing the usefulness of the training and its ownership by the trainees and the developing countries?;
- ✓ Monitoring and feedback mechanisms;
- ✓ Development results; multiplier effects and other than analytical skills and knowledge dimensions.

These levels will be applied to assess the evaluation questions in section 3.5.

3.4. The evaluation criteria

The evaluation will utilize the OECD/DAC development aid evaluation criteria as well as those additional criteria used by the EU Commission's evaluation department. These criteria will be used selectively to assess the major evaluation questions specified in section 3.5.

Impact

A major aspect in this evaluation will be the impact of VERIFIN and identification where and what kind of *impact* there has been at the different levels. The impact will be examined from all of its dimensions, direct, indirect, negative, positive, none, long-term or short-term, multiplier effects, institutional level, individual level, coordination, complementarity etc. levels.

Sustainability

The *sustainability* of the impact and results (outputs, outcomes, effects, impacts) is another major dimension. In view of the earlier evaluation (Evaluation report 2002:7) the long-term involvement of Finland in the VERIFIN training offers an excellent opportunity to look at the sustainability of the results from the different angles and levels as specified above in 3.3.1.

Coordination, cooperation, complementarity

The aspects of *coordination, cooperation, and complementarity* horizontally and vertically with other players in the field of chemical warfare agents and issues relevant to their verification, will also be important.

Coherence and Synergies

Has Finland's policies relevant to the Convention and the VERIFIN training support been systematic and coherent across the board? Have synergies between the different policies been identified and utilized?

Relevance

A major question in any development intervention is *relevance*, meaning whether the intervention is useful and based on the expressed needs of the target population or institution. The mechanisms on how the needs assessments are done and how the prioritization of selection of trainees is done will be one special task in addressing the relevance of the VERIFIN training.

Value-added

The special value-added of Finland in the context of the Convention shall be investigated. The basic question here is what benefits would not have attained the target population, institutions or countries had Finland not been engaged in the VERIFIN training. Often a counterfactual approach is useful in assessing this criterion.

Efficiency and Effectiveness

These criteria measure whether the resources available have been used in such a way that maximum benefits have been drawn, and whether the objectives of the VERIFIN training have been achieved.

3.5. Evaluation questions

The following wider evaluation questions will be assessed in this evaluation and the evaluation criteria of section 3.4 be attributed in the evaluation matrix, as appropriated, to each of these questions.

VERIFIN training:

1. Has the organizational set up of VERIFIN been suitable for the specific training in the chemical warfare agents of the Convention, targeted to the representatives of the developing countries? Has the working modality of organizing the courses mainly in Helsinki been conducive to transferring knowledge and practical skills which can be put into practice in the home institutions of the trainees? Is the training material adapted to the technological level of the institutions of origin of the trainees?
2. Has the scope of implementing VERIFIN training been responding to specified needs in terms of geographical coverage? What are the criteria and the selection process of the trainees? What is the distribution of trainees between the Least Developed Countries and other developing countries, and disaggregated between the genders?

3. Has the training curricula been developed over the years? Who decides on and designs the contents of the curriculum and the training material? Do the former trainees have any role in the development of the course contents, or is the content always kept the same? Is the duration and sequencing of the trainings optimal?
4. Is post-training monitoring carried out for the purpose of developing further the training programme or modules or to assess the usefulness of the training in practice, work, career advancement of the trainees, and the host institutions' and countries' abilities to comply with the convention obligations?

VERIFIN governance:

5. How has the current independent institution developed over years? Have the changes been beneficial to the ability of the institution to deliver its training objectives? What is the share of the training in the overall activity of the institution (although the evaluation looks only at the ODA-funded component)?
6. How is the decision-making on the programme of the training courses and on the selection of trainees made? What is the role of the Ministry for Foreign Affairs in this regard? What is the role of the Finnish Development Policy priorities?
7. Are the resources in terms of the ODA financing and the staff adequate to fulfill the objectives and purpose of the VERIFIN training? How is the ODA attributed to cover only the training of the developing country participants?

The wider political context:

8. What is the effect of the VERIFIN training in the context of global disarmament and non-proliferation of chemical weapons as well as in the area of assistance and protection? What are the views of the stakeholders, the Ministry, OPCW, trainees, countries of the recipients and other possible stakeholders, in this regard?

Other players in this field:

9. What are the roles of the OPCW and other donors, such as Protechnik laboratory in South Africa? Are there similar training institutions elsewhere and if so, how does VERIFIN compare with the corresponding bodies? Is there a possibility for cooperation or network modalities?

The National Authorities level:

10. Is there a mechanism of assessment of technical preparedness of the host institutions to receive a VERIFIN trained person, who will put into practice the skills he/she has learned? Does the host institution's level of preparedness affect in any way the selection of the trainees?
11. Do the National Authorities selectively utilize the trained personnel in issues pertinent to the Convention and fulfilling of the obligations towards the Convention or do the trainees return their "ordinary tasks" in their home institutions? Is there any specific planning scheme among the National Authorities to apply for traineeships for a special purpose, or is the application ad hoc or individually based?

Multiplier level:

12. South-South cooperation – has it worked and if so, what kind of mechanism has been used? Does VERIFIN have a role in this regard? Are there any examples of in-country or inter-regional multiplier training by trainees taking place?

Should the process of the evaluation bring to the fore any additional issues that the evaluators, based on their special expertise and knowledge of the topic, consider essential to include in the report, they may do so.

3.6. Material and Methods

The evaluation will peruse the archived material at the Ministry and the VERIFIN training institute. It will also collect information from the internet or otherwise of other similar training institutions or institutions which have clearly goals synergistic to those of the VERIFIN training. Such initiatives might also arise in the context of the field visits, after which the document study would need to be complemented. The evaluation will also peruse the current status of the Convention and the political background to the topic of this evaluation.

Additional to the documentation, the evaluation team will perform interviews in person as well as electronic surveys to reach out to the trainees all over the world.

For orderly progress in the evaluation, a logical evaluation matrix will be prepared, which combines the 12 evaluation questions with the evaluation criteria appropriately attributed to the questions. The matrix will also contain the well-thought of judgement criteria for the evaluation questions and the indicators against which the progress will be measured, and the sources of verification. The analytical tools utilized in the assessments must be specified.

The evaluation will be carried out in a participatory way, involving the subject training institution of the evaluation, the respective unit of the Ministry, the trainees, the Finnish embassies, and other relevant stakeholders. It is also necessary to contact and discuss the issue with the OPCW, including ICA, Inspectorate Division, and Verification Division.

The field visits will be done to Africa, Latin America and Asia, 2-3 countries in each region. The selection of the countries will be confirmed at the time the document study desk phase is over.

3.7. Work plan and Time table

The evaluation team will compose a work plan with a timetable and distribution of work between the team members. The work plan and timetable, called the inception report, will have appended to it the evaluation matrix described in section 3.6. At least an outline of the travel plans should be included already to the initial inception report.

The work plan is divided into two phases, the desk phase and the field phase. A draft desk report is required, which specifies the issues to be studied in the field phase and justification for those issues.

An accepted desk-phase draft report by the Ministry is a pre-requirement for the field visit phase.

It is estimated that this evaluation will start in October 2010 and come to an end in about four-five months` time.

3.8. Deliverables

The evaluation produces the following reports:

1. The inception report of the desk phase which specifies the work plans, time tables, distribution of work, methodologies to be used and the evaluation matrix. The inception report also describes shortly the context of this evaluation subject.
2. Desk-phase draft report will be structured in the same manner as the final report, but will be based on the facts and findings of the document study and preliminary interviews. This report will already address all the issues of the terms of reference, the 12 questions to the extent possible on the basis of documentation. It will also identify the issues which need validation and verification in the field.
3. Inception report / plan of the field visit.

4. Short briefing with power point presentation of the major findings of field visit/s upon return from the field.
5. Draft final and final reports which combine the findings of the desk and the field phases.

The layout of the reports should follow separate instructions of the Ministry's evaluation reports. A recent evaluation report may be used as a model. The Ministry's Evaluation Guidelines "*Between the Past and Future*" (2007), shall also be used as guidance. The OECD/DAC development evaluation quality standards for the evaluation process and for the final product will guide the evaluation. The final report shall be assessed against the EU Commission's evaluation report quality standards.

The draft final evaluation report will be subject to a round of comments by the relevant stakeholders. After receipt of the comments the evaluators will finalize the evaluation report.

The final evaluation report shall address all issues, questions and levels contained in these terms of reference. It will be written in the English language and submitted to the Ministry as Word and pdf files. The final accepted report will also be delivered to the Ministry as a hard copy with a covering letter for archiving purposes.

It is the prerogative of the Service Provider consultant institution to ensure that all the reports mentioned above are assessed by the quality assurance experts.

3.9. Expertise required

The evaluation task suits well to a group of experts of 2 - 3, one of which may be a junior member. The evaluation experts should in a complementary way have extensive experience in adult education and training, curriculum development, as well as be familiar with the subject matter of the training to be able to assess the quality and contents. One of the experts must have significant experience in leading an evaluation team. Developing country experience and experience in training in the developing country conditions is essential. External to the evaluation team, there should also be assigned two quality controller experts, who have experience and expertise in the subject matters of the evaluation.

The evaluation includes a wide variety of people and institutions from different cultures. Moreover, the subject of the evaluation may be sensitive and highly political. Thus the evaluators must exercise all discretion in discharging their evaluation task, in particular, when visiting the different countries.

At least one of the experts or the junior expert, if relevant, will have to be fluent in the Finnish language. All experts must be fluent in the English language. Due to the

potential field visit to the Latin-America, the working knowledge of Spanish, French and/or Portuguese would be definite assets.

4. The Mandate

The evaluators are expected to contact and consult the necessary stakeholders and parties to this evaluation, individuals and institutions to discharge their evaluation task. The evaluators are not, however, allowed to make any commitment on behalf of the Government of Finland, Ministry for Foreign Affairs or any of the institutions involved.

Helsinki, 19.07.2010

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Director

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