



## Conference report

## Workshops advocating ASEAN Vaccine Security and Self-Reliance (AVSSR): A regional initiative

Charung Muangchana<sup>a,\*</sup>, Yothin Thanormwat<sup>b</sup>, Apichat Kongsiang<sup>b</sup><sup>a</sup> National Vaccine Institute (Public Organization), Bldg. 4, Flr. 5, Building of Barasnaradura Infectious Diseases Institute, 38 Soi Tiwanon 14, Talat Kwan, Muang, Nonthaburi 11000, Thailand<sup>b</sup> Bureau of Vaccine Policy Development, National Vaccine Institute (Public Organization), Bldg. 4, Flr. 5, Building of Barasnaradura Infectious Diseases Institute, 38 Soi Tiwanon 14, Talat Kwan, Muang, Nonthaburi 11000, Thailand

## ARTICLE INFO

## Article history:

Received 25 May 2017

Received in revised form 16 April 2018

Accepted 4 May 2018

Available online 20 July 2018

## Keywords:

National Vaccine Institute (Thailand)

NVI

ASEAN Vaccine Security and Self-Reliance

AVSSR

Vaccine

Shortage of vaccine

ASEAN Post-2015 Health Development

Agenda

## ABSTRACT

The concept of ASEAN Vaccine Security and Self-Reliance (AVSSR) has recently been advocated for by the National Vaccine Institute (NVI), a public organization of Thailand, through two workshops in 2014 and 2015 organized in cooperation with the World Health Organization (WHO) for the ASEAN Collaboration Initiatives for Regional Vaccine Security and Self-Reliance (VSSR). In both workshops relevant policy makers, Expanded Programme on Immunization (EPI) managers, and experts from government and partner agencies involved in the vaccine life cycle actively participated. A paradigm shift in leveraging the initiatives of VSSR from national to regional levels was noted and reiterated.

The first workshop's objective was to understand the perspectives and identify the needs of ASEAN countries regarding vaccine security, and to list potential areas for further collaboration. The existing vaccine-related capacities, collaborations, and networks in ASEAN were discussed based on findings from a pre-workshop, self-administered questionnaire survey. The workshop ended with four key areas unanimously recommended for regional collaboration strengthening: (1) system development for vaccine security; (2) human resource development; (3) ASEAN price policy for vaccine (APPV) and pooled procurement; and (4) communication and coordination. A call for immediate action was made, prompting the second workshop to focus only on "communication and coordination" to identify concrete, actionable collaborative models for effective communication and coordination. At the second workshop, a five-year Communication and Coordination Action Plan (CCAP) was developed to foster long-term AVSSR.

The AVSSR's ultimate goal is to avoid incidental vaccine shortage and ensure sufficient supply of affordable, quality vaccines for normal and urgent situations both at the national and ASEAN-wide levels. To date, collaboration for AVSSR is being strengthened according to the ASEAN post-2015 Health Development Agenda and its collaborative framework among concerned countries and development partners. Nevertheless, to achieve the goal, integration of multiple strategies based upon strong policy commitment and uninterrupted engagement among relevant partners are required.

© 2018 Elsevier Ltd. All rights reserved.

## 1. Introduction

Vaccination is a cost-effective health intervention and an essential measure in the prevention and control of infectious diseases that are vaccine preventable diseases (VPDs). Currently the spread of VPDs remains a major public health problem in low- and middle-income countries (LMICs) worldwide, including member countries of the Association of Southeast Asian Nations (ASEAN). To combat these diseases, the most powerful health strategy

strongly recommended by the WHO is to ensure sufficient supply of essential vaccines used in the National Immunization Programs (NIPs). However, constraints pertaining to the supply chain of vaccines, such as oligopoly or limited competition, since the market is shared by a small number of vaccine manufacturing companies or no guarantee of production due to poor market demand forecasting, have caused sporadic vaccine shortage in several ASEAN countries. The shortage of essential vaccines, even for a short period of time, may bring about public health emergencies by increasing the risk of VPD resurgence and/or causing outbreaks of VPDs among vulnerable persons across ASEAN countries.

This challenge has prompted the National Vaccine Institute to expand focus, from achieving vaccine security to achieving vaccine

\* Corresponding author.

E-mail addresses: [charung.m@nvi.mail.go.th](mailto:charung.m@nvi.mail.go.th), [nvi@nvi.mail.go.th](mailto:nvi@nvi.mail.go.th) (C. Muangchana), [yothin.t@nvi.mail.go.th](mailto:yothin.t@nvi.mail.go.th) (Y. Thanormwat), [apichat.k@nvi.mail.go.th](mailto:apichat.k@nvi.mail.go.th) (A. Kongsiang).

security in conjunction with long-term self-reliance of each ASEAN country as well as of the whole region, via closer collaboration and networking among countries [1]. “Vaccine security” has been defined by the United Nations Children’s Fund (UNICEF) as the “sustained, uninterrupted and timely supply of affordable vaccines of assured quality” [2–4]. By definition, three critical elements in assuring vaccine security are (1) the guaranteed procurement of vaccines through firm contract with manufacturers; (2) secure, multi-year allocations for vaccine financing; and, (3) long-term accurate forecasting of vaccine requirements [5]. Nevertheless, in the current perspective, “vaccine security” is coupled with “self-reliance” into “vaccine security and self-reliance (VSSR)”, aiming to address ASEAN specific needs and to promote research and development as well as self-production of essential vaccines, taking into account the capacity of each individual country and of the whole region.

In 2014 and 2015, two consecutive workshops among ASEAN countries were hosted by the National Vaccine Institute in Thailand to advocate regional vaccine security and self-reliance. The first workshop was held in Phuket and the second workshop was held in Bangkok. This report provides an overview of why and how those regional workshops were organized, their outcomes, and describes the progress of the AVSSR policy uptake in relation to ASEAN official bodies after the workshops, from late 2013 until the end of 2016. During that period new ASEAN official mechanisms for its Post-2015 Health Development Agenda were formed. While simultaneously efforts to ensure that the AVSSR would be recognized as an important element were made. The report communicates the history and current state of development with broader audiences and development partners and mobilizes more of their support and contribution for the future implementation of AVSSR initiatives.

## 2. Thailand, the ASEAN Collaboration Initiatives for Regional Vaccine Security and Self-Reliance, and the workshops

In the late 2013, Thailand National Vaccine Committee (NVC) took note of the official establishment of ASEAN Community in 2015 for regional economic integration [6] and the urgent need to develop an ASEAN-specific, post-2015 health development agenda. The NVC determined that 2014–2015 would be the most appropriate time to bring the issue of regional VSSR to the attention of all ASEAN countries and relevant international partners. It provided an opportunity for parties concerned to work closer together and achieve VSSR in ASEAN, both at national and regional levels. The National Vaccine Institute, being the secretariat for the National Vaccine Committee as well as Thailand’s national vaccine policy initiator and driver, was subsequently tasked by the National Vaccine Committee to bring this effort forward on behalf of Thailand.

The NVI thus began an extensive consultative process with concerned authorities and experts, starting from inside Thailand and then extending to colleagues and authorities in ASEAN countries as well as other relevant bodies and development partners, including: the ASEAN Secretariat Office (ASO), WHO Regional Offices for the South-East ASIA (SEARO), and the Western Pacific (WPRO). Upon consultation, an informal body namely “the ASEAN Collaboration Initiatives for Regional Vaccine Security and Self-Reliance” was successfully formed and brought to action in the promotion of VSSR in ASEAN, spearheaded by Thailand and WHO.

With help and support of the ASEAN Collaboration Initiatives for Regional Vaccine Security and Self-Reliance, two regional workshops entitled “Workshop among ASEAN Countries for Regional Vaccine Security” and “Follow-Up Workshop on Collaborative Models for the Effective Communication and Coordination among

ASEAN Countries for Regional Vaccine Security” were held on October 1–3, 2014 and August 17–18, 2015 in Phuket and Bangkok, respectively. Both workshops were hosted by the National Vaccine Institute and WHO. Invitations to both workshops were sent to all relevant government and non-government institutions in all 10 ASEAN countries. Delegates from eight countries (there were no delegates from Brunei Darussalam and Singapore) attended and participated in both workshops. Participants of the 2014 workshop were experienced persons working in any of the four main areas of vaccine life cycle, i.e. research and development; production; regulation; or national immunization. However, the majority of participants of the 2015 workshop were members of the group assigned to focus on communication and coordination in the 2014 workshop. In addition to policy makers, EPI managers and experts from ASEAN countries, delegates from non-ASEAN or international bodies and development partners, including Ministry of Health (MoH) of Sri Lanka, WHO, ASEAN Secretariat Office (ASO), ASEAN Network for Drugs, Diagnostics, Vaccines and Traditional Medicines Innovation (ASEAN-NDI), International Vaccine Institute (IVI) South Korea, Developing Countries Vaccine Manufacturers’ Network (DCVMN), National Regulatory Authorities (NRA) Alliance, National Control Laboratory (NCL) Network, and Thailand Center of Excellence for Life Sciences (TCELS) also took part in these workshops to share their knowledge, perspectives and experiences in the collaboration for regional VSSR.

Breakout sessions and panel discussion of both workshops enabled participants to share information on the current situation of the capacities, challenges and needs of individual countries and the region, in relation to vaccine and immunization. Participants shared views on ways forward on strategies and specific actions that ASEAN countries and concerned development partners should take to advocate and foster AVSSR. These were recorded as recommendations of the workshops.

## 3. Key findings of the two workshops

### 3.1. Results of the 2014 pre-workshop survey

Shortly in advance of the 2014 workshop, a self-administered questionnaire survey among the ten ASEAN countries (AMSS) encompassing four designated areas of vaccine life cycle i.e. research and development, production, regulation, and immunization has been circulated to both WHO Regional Offices (WPRO and SEARO) for official distribution to all AMSS. As well as a review of existing electronic data sources were also conducted by the National Vaccine Institute. The survey and the review were designed to explore the existing capacities, collaborations, and major active networks involved in the vaccine life cycle, and the willingness of ASEAN countries to work closer together to address common problems. Results of the survey and the review were summarized and shared with participants at the beginning of the workshop as an input to facilitate group discussion.

This pre-workshop study found that most of the basic and essential vaccines listed in ASEAN countries’ NIPs were in line with the WHO position papers which recommended routine vaccines for immunization among specific age groups-children. Furthermore, consideration of introducing those vaccines was also dependent upon epidemiological patterns of communicable diseases in their countries. Notably, majority of those vaccines were either imported or received by donation. Only few could be produced locally or within ASEAN countries for their NIP use priority. Five ASEAN countries – Indonesia, Myanmar, Singapore, Thailand, and Viet Nam – had significant capacities on vaccine research and development, including production as shown in Table 1 [7].

Varying degrees of discrepancy among ASEAN countries on national capacities were also noted. Brunei Darussalam, Cambodia,

**Table 1**  
Capacity of ASEAN countries on vaccine development and production in 2014.

ASEAN countries	Capacity on vaccine research and development				Capacity on vaccine production	
	Pre-clinical study	Clinical study			Upstream	Downstream
		Phase I	Phase II	Phase III		
Indonesia	Rotavirus, Typhoid, IPV, aP, PCV, HB, MR, Pandemic Flu				OPV, Measles, TT, BCG, DT, DTP-HB-Hib, Td, DTP, DTP-HB	HB, seasonal Flu
Myanmar	–				HB, TT	Rabies
Singapore	–				Bulk vaccine of Pneumococcal	
Thailand	Dengue, JE, D, T, P, Chikungunya, Inactivated Influenza vaccine (IIV), Live attenuated Influenza vaccine (LAIV), EV71, Melioidosis, Leptospirosis, House Dust Mite	aP	LAIV	House Dust Mite vaccine	BCG, JE (SMB)	Rabies, IIV, OPV, HB, DTP-HB, Measles, MMR, JE (live chimeric)
Viet Nam	Seasonal Flu, H5N1, JE	H5N1, JE (Vero cell)			HB, Hep-A, JE, Cholera, BCG, TT, Td, DTP, Typhoid, OPV, Rota, Measles	

**Acronym:**

IPV = Inactivated polio vaccine.  
aP = acellular Pertussis.  
PCV = Pneumococcal conjugate vaccine.  
HB = Hepatitis B.  
MR = Measles and rubella.  
Flu = Influenza vaccine.  
JE = Japanese encephalitis.  
DTP = Diphtheria, Tetanus, Pertussis.  
EV 71 = Enterovirus 71.  
TT = Tetanus toxoid.  
BCG = Bacille Calmette-Guerin.  
DT/Td = Diphtheria and tetanus.  
Hib = Haemophilus influenzae type B.  
SMB = Sucking mouse brain.  
Hep-A = Hepatitis A.

Lao People's Democratic Republic (PDR), Malaysia, and Philippines were non-vaccine producing countries and most vaccines being used by their NIPs were imported from the multifunctional companies as a self-procuring country. In the meantime, Cambodia, Lao PDR and Myanmar were also listed as UN Agencies-eligible countries for new vaccines support, dedicated by Gavi, the Vaccine Alliance [8].

In terms of National Regulatory Authorities (NRA), current capacities on 6 critical control functions defined by the WHO were examined and characterized by groups of vaccine and non-vaccine producing countries. Survey findings indicated that non-vaccine producing countries have limited capacity regarding to 6 critical control functions (marketing authority, post marketing surveillance, system of lot release, laboratory access, GMPs inspection, clinical trial). Whereas nearly all of them could be exercised completely by vaccine producing countries to ensure quality of vaccines.

Based on current capacity of ASEAN countries, the study tried to identify challenges and gaps on vaccine value chain. Preliminary, it is found that prioritization of targeted vaccines at policy level helps confine a clear direction of vaccine research and development that truly comply with country needs, not individual interested. Whereas the major challenge of vaccine production is no secured volume for manufacturers due to local vaccine procurement relied on tendering system that competing between manufacturers and suppliers. In terms of the NRA, it is revealed that the legal related to pharmaceutical regulations are difficult to be updated, as well as unclear Good Manufacturing Practice (GMP) guideline on vaccine production for clinical trials. More details are shown in Fig. 1.

In addition, the study also identified the existing major regional collaborative networks involved in the vaccine life cycle as DCVMN, ASEAN-NDI, NRA Alliance, NCL Network, and Mekong Basin Disease Surveillance (MBDS) Consortium [7]. These networks

play their specific roles in supporting and strengthening vaccine development and immunization within the region.

Taking note of all the study results, participants unanimously agreed that several ASEAN countries, either vaccine or non-vaccine producing, have been significantly dependent on vaccines from abroad to run their NIPs. Viewing from a country perspective, this situation needs to be addressed as a continuing, long-term challenge to the achievement of national VSSR goals. As a normal practice, many different strategies recommended by UNICEF are being deployed in all ASEAN countries to ensure their sufficient national vaccine supply, however, vaccine shortage which is a critical public health problem continues to emerge occasionally. The shortage of essential vaccines could let outbreaks of VPDS, such as Diphtheria, Measles, and Pertussis, expand, directly affecting the achievements of Health Systems Strengthening initiatives and access to routine national immunization services.

### 3.2. Results of workshops and a paradigm shift towards regional VSSR

During both workshops, the ASEAN Collaborative Initiatives for Regional Vaccine Security and Self-Reliance discussed ways to increase collaboration and integration among ASEAN countries, with a focus on resource pooling in support of vaccine research and development and production for regional specific needs. To enhance VSSR in ASEAN, four potential areas were identified at the end of the 2014 workshop as follows:

- (1) **System development for vaccine security.** This area would underline the establishment of effective collaborative systems and mechanisms, including networks which aim to identify, for example, the ultimate goals, needs, gaps, research agenda, production priority, and capacity building for reaching out the VSSR goals.

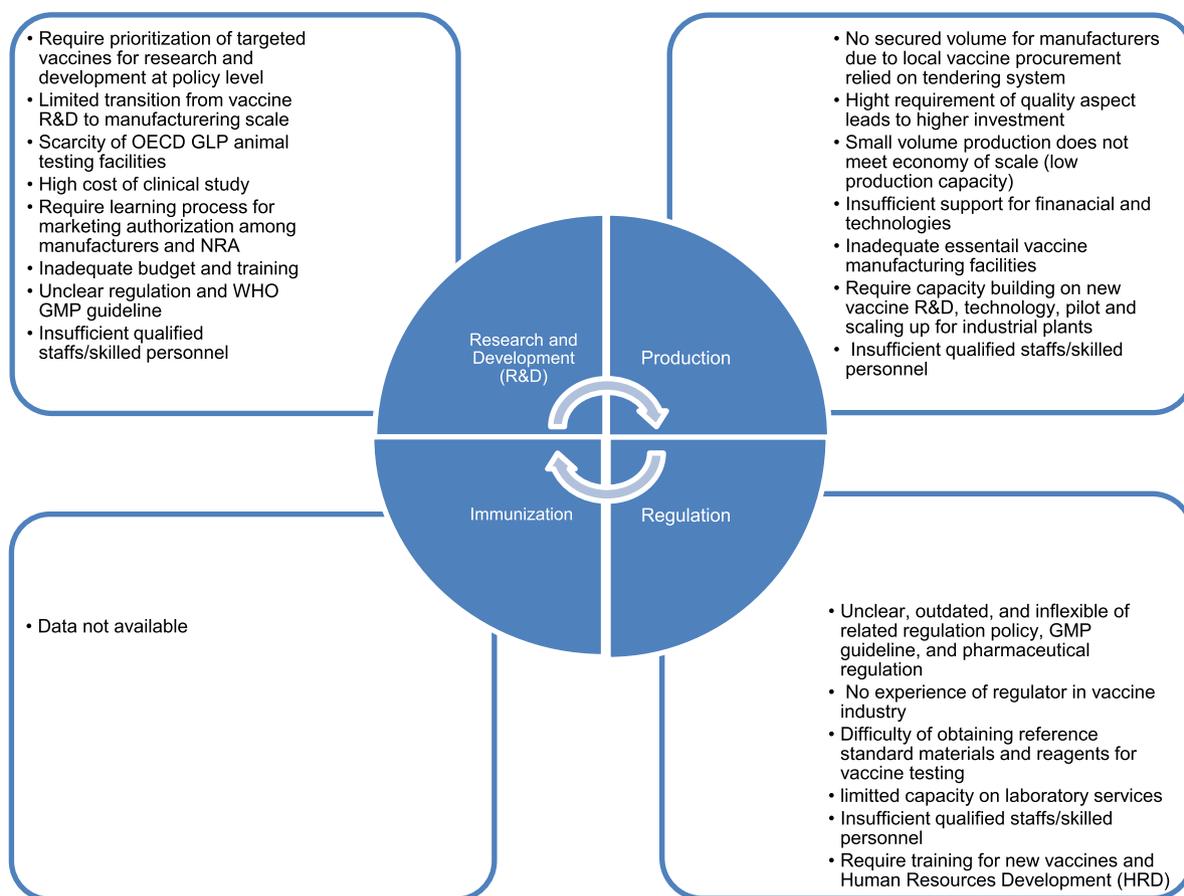


Fig. 1. Major challenges and gaps on vaccine research and development, production, regulation, and immunization among ASEAN countries in 2014.

- (2) **Human resource development.** To produce sufficient, efficient researchers and technical staffs through the whole cycle of vaccine development and immunization. A curriculum blueprint and detailed proposal for a Center of Excellence should be drafted to build an “ASEAN School of Vaccines and Biopharmaceuticals”.
- (3) **ASEAN price policy for vaccine.** To establish reference prices for vaccines through information exchange on vaccine purchasing prices and annual demand of each ASEAN country. Importantly, development of an ASEAN harmonization scheme on standard operating procedures for vaccine procurement that may in the long-term lead to an ASEAN “pooled procurement” should be initiated. A mechanism for the pooled procurement of essential medicines and strategic health supplies that save lives, as currently being implemented in the American countries through the Strategic Fund of the Pan American Health Organization [9], serves as a good example for this effort. Meanwhile, closer collaboration among ASEAN countries through a WHO-initiated project on vaccine product, price and procurement should be considered [10].
- (4) **Communication and coordination.** To provide appropriate tools, mechanisms, and channels for effective communication and coordination among ASEAN countries and internationally, on certain subjects such as information sharing and awareness raising on the significance of VSSR and the value of vaccination [7].

Subsequently in the follow-up workshop which took place in 2015, the main topic of discussion was on communication and coordination as a fundamental component for the achievement of

VSSR. A Communication and Coordination Action Plan (CCAP) was successfully developed under the shared vision of “A Healthy ASEAN Community through Timely, Equitable Access of Affordable, Safe and Quality Vaccines” [11]. The CCAP described the seven core elements of communication, i.e. vision, important audiences, key messages, strategies, priorities, timeframe, and monitoring and evaluation, in line with the ASEAN Communication Master Plan (ACMP) to jump start the initial phase of AVSSR implementation [12]. For more information, the full CCAP can be accessed online at the following website: [http://www.nvi.go.th/index.php/blog/2017/02/CCAP\\_2016-2020](http://www.nvi.go.th/index.php/blog/2017/02/CCAP_2016-2020).

More noteworthy details of both regional workshops such as workshop participants, main and specific objectives, how the events were conducted, outcomes and recommendations are shown in Table 2.

In short, the salient points and compendium of the ASEAN Collaboration Initiatives for Regional Vaccine Security and Self-Reliance could be described by combining the main recommendations of the workshops as follows:

1. AVSSR needs to be included as a priority health development agenda within the ASEAN post-2015 official framework.
2. The sustainable and uninterrupted collaboration in supporting regional VSSR needs to be enhanced.
3. ASEAN countries need to work more in close partnership with concerned international bodies and networks, for instance, WHO and DCVMN.
4. Official ASEAN working mechanisms for further collaboration need to be established in the long run. Until then, NVI as a focal point of the group should continue to coordinate with all relevant parties to foster regional VSSR.

**Table 2**  
Summary of the two regional workshops dedicated to vaccine security and self-reliance in ASEAN, 2014–2015, Thailand.

Workshop name	Workshop among ASEAN Countries on Opportunities for Regional Vaccine Security	Follow-up Workshop on Collaborative Models for the Effective Communication and Coordination among ASEAN Countries for Regional Vaccine Security
Host	NVI and WHO	NVI and WHO
Time and Place	Oct 1–3, 2014, Phuket	Aug 17–18, 2015, Bangkok
Countries sending delegates	8 out of 10 ASEAN countries i.e. Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, and Viet-Nam	8 out of 10 ASEAN countries i.e. Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, and Viet-Nam
Participants	78 persons composed of countries' health policy makers and experts actively working in the four main areas of vaccine life cycle, including international partners	44 persons composed of countries' and international health policy makers, experts and practitioners, mostly the former members of the group on communication and coordination in the 2014 Phuket workshop
Main objective	To provide a forum for ASEAN countries to explore opportunities and feasibility for cooperation to improve long-term vaccine security in the region	To provide a forum for those who are interested in communication and coordination to shape up concrete collaborative models on effective communication and coordination for improving long-term VSSR in ASEAN
Specific objectives	<ul style="list-style-type: none"> <li>To understand perspectives of vaccine security among ASEAN countries</li> <li>To identify needs of ASEAN countries with regard to vaccine security, and potential areas for cooperation</li> </ul>	<ul style="list-style-type: none"> <li>To review and understand the existing models, programs, or activities on communication and coordination related to vaccine security in ASEAN and worldwide</li> <li>To establish concrete strategies and action plan of effective communication and coordination to enhance regional vaccine security and self-reliance</li> </ul>
How it was conducted	<ul style="list-style-type: none"> <li>A self-administered, questionnaire-survey on individual ASEAN country's capacity of each area of vaccine life cycle i.e. research and development, production, regulation and national immunization, as well as a review on existing electronic data sources, were conducted in advance and results presented at the beginning of the workshop by NVI.</li> <li>Issues discussed included: the principle, concept and ideas on vaccine security and self-reliance development; country capacity and needs; and regional collaboration for vaccine &amp; immunization in ASEAN</li> <li>Breakout sessions were designed to identify potential areas for possible collaboration, using foresight technique</li> </ul>	<ul style="list-style-type: none"> <li>An infographic exhibition was displayed at the workshop venue. It summarized outputs and recommendations of 2014 Phuket Workshop and provided a strong linkage between these two regional workshops dedicated to vaccine security and self-reliance.</li> <li>Issues discussed included: the importance of communication and coordination in supporting regional vaccine security and self-reliance; alignment with the ASEAN Communication Master Plan (ACMP); and the WHO-initiated V3P Project.</li> <li>Small groups discussion were conducted to draft a Communication and Coordination Action Plan (CCAP), composing of 7 elements as per the ACMP</li> </ul>
Outcomes	<ul style="list-style-type: none"> <li>Awareness of existing capacities in vaccine research and development, including production and of existing vaccine-related networks among ASEAN countries</li> <li>Identification of 4 potential areas for further collaboration and advocacy:               <ol style="list-style-type: none"> <li>System development for vaccine security</li> <li>Human Resource Development (HRD)</li> <li>ASEAN Price Policy for Vaccine (APPV) and pooled procurement</li> <li>Communication and Coordination.</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>A draft of preliminary action plan on communication and coordination in supporting regional vaccine security and self-reliance for the period 2016–2020, envisioning "A Healthy ASEAN Community through Timely, Equitable Access of Affordable, Safe and Quality Vaccines"</li> <li>Consideration of a WHO-initiated project on vaccine product, price and procurement (V3P) for further collaboration among ASEAN countries</li> </ul>
Recommendations	<ul style="list-style-type: none"> <li>AVSSR needs to be included as a priority health development agenda within the ASEAN official framework post-2015.</li> <li>The sustainable and uninterrupted collaboration in supporting regional vaccine security and self-reliance needs to be enhanced.</li> </ul>	<ul style="list-style-type: none"> <li>ASEAN countries need to work more in close partnership with concerned international bodies and networks, for instance; WHO and DCVMN</li> <li>Official ASEAN working mechanisms for further collaboration needs to be established. Until then NVI as focal point of the group should continue to coordinate with all relevant parties to foster regional vaccine security and self-reliance.</li> </ul>

Based upon the official establishment of ASEAN Community by the end of 2015 representing the spirit of regional solidarity as one community, participants of both workshops discussed extensively what regional solidarity would mean in terms of action, specifically on fostering VSSR. The paradigm shift in leveraging the initiatives of VSSR from national to regional (i.e. ASEAN community) levels was clearly highlighted and reiterated in both workshops. It was agreed that approaching VSSR from an ASEAN community perspective would reinforce the efforts of each "stand-alone" member state and development partner in achieving the CCAP shared vision of "A Healthy ASEAN Community through Timely, Equitable Access of Affordable, Safe and Quality Vaccines" in the near future.

#### 4. ASEAN Post-2015 Health Development Agenda: new implementation mechanisms and their implications on AVSSR

The end of 2015 marked the target date of world efforts to achieve the eight Millennium Development Goals (MDGs), in which a blueprint had been formed and agreed by all the world's countries and also leading development institutions in 2000, to

urge their unprecedented endeavors to meet the minimum needs of global development goals [13]. Hence, well before 2015 all countries and international development partners had been taking the opportunity to examine achievements, gather lessons learned, and work out a new global blueprint entitled "Sustainable Development Goals" (SDGs) for the post-2015 period which consists of all development issues, including health and unfinished targets of the MDGs.

As for ASEAN, the official establishment of the ASEAN Community for regional economic integration which was also scheduled for the end of 2015 [6], and the need to develop a post-2015 Health Development Agenda specifically for ASEAN have led to the drafting and finalization of a new blueprint and administrative structure for ASEAN post-2015 health cooperation. ASEAN has so far been successful in working towards achieving the SDGs. In terms of health particularly, the ASEAN Post-2015 Health Development Agenda together with its Governance Implementation Mechanism and Regional Strategies and Targets were made available and ready for implementation before the end of 2015. The years 2016–2017 were marked as the transition period and by the end of 2016 the overall work plans for 2016–2020 of the ASEAN Post-2015 Health

Development Agenda were available for implementation [14]. However, official approval of these proposed work plans by the ASEAN Health Ministers Meeting (AHMM) is expected in late 2017.

Fortunately, activities to foster AVSSR as recommended by both workshops have already been integrated into the official ASEAN work plans and implementation framework since the beginning of the transition period, without difficulties. The success of AVSSR policy uptake so far is mainly due to efforts of the National Vaccine Institute, on behalf of Thailand and the ASEAN Collaboration Initiatives for Regional Vaccine Security and Self-Reliance, which has been tirelessly resonating advocacy to high level ASEAN health policy makers since the 2014 Phuket workshop. In doing so, the National Vaccine Institute would not be able to achieve much without the strong support and continuous cooperation of the ASEAN Secretariat Office and member countries, as well as the concerned health-related subsidiary and technical bodies such as

ASEAN Expert Group on Communicable Diseases (AEGCD), Senior Officials Meeting on Health Development (SOMHD), AHMM, and the ASEAN Health Cluster 3 Meeting. A series of ASEAN health policy uptake before and after the initiatives for AVSSR, including the timeline of selected important events and significant progress during the years 2014–2016 could be highlighted below as well as in Fig. 2.

1. The ASEAN Post-2015 Health Development Agenda was finalized shortly before the first workshop. The 9th SOMHD had identified priority Post-2015 Health Development Agenda since June 2014. Then in September 2014, the 12th AHMM officially endorsed the proposed Post-2015 Agenda and its goals, envisioning “A Healthy, Caring and Sustainable ASEAN Community” and representing a crucial milestone for region-wide implementation. Further details for the implementation phase, such



**Fig. 2.** Summary of timeline, selected events and main achievements of regional vaccine security and self-reliance throughout the years 2014–2016. **Acronym:** SOMHD = Senior Officials Meeting on Health Development. AHMM = ASEAN Health Ministers Meeting. AEGCD = ASEAN Expert Group on Communicable Diseases. DCVMN = Developing Countries Vaccine Manufacturers’ Network.

- as the concerned strategies and targets as well as the revised ASEAN official working mechanism, began to be determined from then on.
2. During the following period from October 2014 until August 2015 while details for the implementation phase of the Post-2015 Agenda were being negotiated, Thailand by the National Vaccine Institute, in close partnership with the WHO has organized the two regional workshops on VSSR and reported all outcomes and recommendations respectively to the 9th and 10th AEGCD meetings, according to the ASEAN official working mechanism then. The AEGCD took note of and agreed with all the results of both workshops, most importantly on the significance of VSSR. It also approved the call for regional cooperation to assure availability, accessibility and self-reliance on quality essential medicines, including vaccines, to be in line with work plans of the ASEAN Post-2015 Health Development Agenda.
  3. In September 2015, the Governance Implementation Mechanism for the ASEAN Post-2015 Health Development Agenda and the Regional Strategies and Targets of the four Clusters of the Agenda were considered and agreed by the 10th SOMHD. The ASEAN bodies also decided that the years 2016–2017 would be the transition period; existing Working Groups would be dissolved; and concrete outcomes that are aligned with the priorities and goals of Health Clusters would continue to be delivered.
  4. The most recent achievements in bringing practical ideas and recommendations regarding VSSR into the new ASEAN official work plans happened in July 2016 when the 1st Meeting of the Health Cluster 3: Strengthening Health Systems and Access to Care, was organized in the Philippines. In the Cluster 3 meeting, an agreement was reached on the contents and format of overall cluster 3 work plan for 2016–2020 and immediate next steps. Contents of a plan to address VSSR, drafted based upon outcomes and recommendations of the two regional workshops, were integrated successfully in the Health Priority Issue 17: Pharmaceutical Development under the Health Cluster 3 Work Plan. This arrangement has a reference to the current WHO Health System Framework containing six “building blocks” in which one of those “blocks” is about “medical products, vaccines and technologies” [15]. Thailand as represented by the National Vaccine Institute was assigned to be a lead country for VSSR, together with Indonesia, Malaysia and Philippines in their capacity of Co-lead countries. In the following month, the 11th SOMHD in Brunei Darussalam discussed the overall work plans for 2016–2020 and provided suggestions for improvement. These proposed work plans, after necessary adjustments, would be submitted for approval by the 13th AHMM or the 31st ASEAN Summit, scheduled to be in Brunei Darussalam in September and November 2017, respectively. Upon approval, all work plans including the work plan on VSSR would move to implementation phase.

## 5. Conclusions

It is promising that the ASEAN Collaboration Initiatives for Regional Vaccine Security and Self-Reliance has successfully and timely integrated all immediate action points of the outcomes and recommendations of the two regional workshops into the draft ASEAN work plan for the period 2016–2020. The draft five year plans to foster regional VSSR for ASEAN has received well acceptance and attention from all ASEAN countries and major development partners. By the end of 2016, the draft was reviewed and is pending official approval in 2017 at the forthcoming AHMM or ASEAN Summit, according to the normal ASEAN processes.

The first activity of this draft 5-year work plan to be implemented by 2017 is the ASEAN Vaccine Baseline Survey (AVBS).

The AVBS plans to take note of the situation and perform gap analysis on national and regional capacity of vaccine research and development, production, regulation and national immunization in ASEAN. Results obtained would be essential inputs for another regional workshop to develop regional strategic and action plans for VSSR, which is planned to be held in 2018. Additionally, activities on communication and coordination, as formulated in the CCAP during the 2015 Bangkok workshop, will also be deployed in parallel to gain better understanding, perception, awareness and support towards AVSSR from broader audiences and stakeholders within and outside the region.

Hence, by now an official endorsement of the work plan fostering AVSSR, drafted as an integral part of ASEAN Post-2015 Health Development Agenda, is still awaited from the ASEAN Bodies on Health (i.e. the AHMM or ASEAN Summit). We are not anticipating difficulties in this administrative step, given the clear Governance Implementation Mechanism as approved by the SOMHD in late 2015 and the subsequent development of ASEAN work plans. However, we are confident that the “ASEAN Post-2015 Health Development Agenda”, envisioning “A Healthy, Caring and Sustainable ASEAN Community”, and the CCAP, envisioning “A Healthy ASEAN Community through Timely, Equitable Access of Affordable, Safe and Quality Vaccines”, would demand that the ultimate goal and targets of AVSSR need to be achieved soonest in order to turn expectations into reality. Tangible and strong policy commitment, engagement and cooperation from relevant partners and stakeholders in ASEAN, as well as from the international development agencies, are strictly required.

And lastly, there has been no specific policy statement to foster VSSR in ASEAN Community from ASEAN policy making bodies, neither the AHMM (the highest policy making body for health sector) nor the ASEAN Summit (the ASEAN supreme policy-making body). We are looking forward to having an official policy statement for AVSSR for public reference and sustainability since it will take time and efforts before we could achieve the AVSSR ultimate goal. Such policy statement, if feasible, should be made available at the same time of or after the 2017 AHMM’s endorsement of the draft 5-year work plans. This will accomplish the mission of the ASEAN Collaboration Initiatives for Regional Vaccine Security and Self-Reliance, and assure that AVSSR will always be brought into consideration and concrete action implemented in ASEAN countries to realize the visions of the Post-2015 Health Development Agenda and the CCAP.

## Conflict of interest statement

The authors are employees of the respective indicated organizations, and have no conflict of interest to declare. These two consecutive regional workshops have received financial support from the National Vaccine Institute (Public Organization), Thailand as a principal host of the events. Partial financial support, including technical support were also provided by the WHO and ASEAN Secretariat Office as friendly partnerships. All invited speakers, chairs, co-chairs and workshop participants have not received any honorarium from the host.

The findings and conclusions stated in this report are those of the invited speakers and workshop participants, and do not necessarily represent the perspectives of their institutions or organizations.

## Acknowledgements

We are grateful to all speakers, chairs, co-chairs and workshop participants from ASEAN countries, whose active participation and contribution made both workshops possible. We would like to

express sincere gratitude to all contributing institutions and organizations, including WHO, ASEAN Secretariat Office, ASEAN-NDI, DCVMN, IVI South Korea, NRA Alliance, NCL Network, Thailand MOPH and affiliated departments, especially the Department of Medical Sciences (DMSc) and the Food and Drug Administration (FDA) for their financial and/or technical supports. We are indebted to Mr. Stephane Guichard for his assistance and contribution to the events; Ms. Lois Privor-Dumm as a native English speaker for her proofreading and grammar editing of this manuscript; and, Ms. Tasnim Partapurand Dr. Jessada Salathong for their invaluable suggestions in developing the Communication and Coordination Action Plan (CCAP). We thank the Thailand Center of Excellence Life Sciences (TCELS) for the first workshop operation on Foresight technique and Dr. Somchai Peerapakorn for his kind guidance in the manuscript preparation.

## References

- [1] World Health Organization Regional Office for South-East Asia. WHO South East Asia Regional Immunization Technical advisory Group (SEAR-ITAG); report of the seventh meeting SEAR-ITAG, New Delhi, India; 2016.
- [2] UNICEF Supply Division Vaccine Procurement. Vaccination ecosystem health check: achieving impact today and sustainability for tomorrow! 2015. <<http://www.fondation-merieux.org/documents/en/conference-resources/2015/vaccination-ecosystem-health-check/global-vaccine-demand-supply-and-outlook-healthier-deehan.pdf>> [accessed 23.09.15].
- [3] Costa A, Henao-Restrepo AM, Hall SM, Jarrett S, Hoekstra EJ. Determining measles-containing vaccine demand and supply: an imperative to support measles mortality reduction efforts. *JID* 2003;187(Suppl 1):S22–8.
- [4] Pre-empting and responding to vaccine supply shortages. SAGE. Executive summary; 2016. <[http://www.who.int/immunization/sage/meetings/2016/april/1\\_Mariat\\_shortages\\_SAGE\\_2016.pdf](http://www.who.int/immunization/sage/meetings/2016/april/1_Mariat_shortages_SAGE_2016.pdf)> [accessed 16.11.16].
- [5] UNICEF. Supplies and logistics. Vaccine security; 2012. <[http://www.unicef.org/supply/index\\_vaccine\\_security.html](http://www.unicef.org/supply/index_vaccine_security.html)> [accessed 16.11.16].
- [6] ASEAN Secretariat. ASEAN economic community 2015: progress and key achievements; 2015. <<http://www.asean.org/storage/images/2015/November/aecpage/AEC-2015-Progress-and-Key-Achievements.pdf>> [accessed 15.10.2016].
- [7] NVI and WHO. A full meeting report of the workshop among ASEAN countries on opportunities for regional vaccine security. 1–3 October, 2014 in Phuket, Thailand.
- [8] GAVI the Vaccine Alliance. Countries eligible for support; 2016. <<http://www.gavi.org/support/apply/countries-eligible-for-support/>> [accessed 8.11.16].
- [9] Pan American Health Organization and World Health Organization Regional Office for the Americas. PAHO strategic fund. <[http://www.paho.org/hq/index.php?option=com\\_content&view=article&id=12163&Itemid=42005&lang=en](http://www.paho.org/hq/index.php?option=com_content&view=article&id=12163&Itemid=42005&lang=en)> [accessed 25.01.16].
- [10] World Health Organization. Vaccine product, price and procurement (V3P); 2016. <[http://www.who.int/immunization/programmes\\_systems/procurement/en/](http://www.who.int/immunization/programmes_systems/procurement/en/)> [accessed 15.02.16].
- [11] NVI and WHO. Communication and Coordination Action Plan (CCAP), a healthy ASEAN countries through access quality of vaccines; 2016.
- [12] ASEAN Secretariat. ASEAN communication master plan – ASEAN: a community of opportunity; 2014. <<http://www.asean.org/resources/item/asean-communication-master-plan-asean-a-community-of-opportunities>> [accessed 16.10.16].
- [13] UNITED NATIONS. The millennium development goals report 2015; 2015. <[http://www.un.org/millenniumgoals/2015\\_MDG\\_Report/pdf/MDG%202015%20rev%20\(July%201\).pdf](http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf)> [accessed 15.10.16].
- [14] ASEAN Post-2016 Health Development Agenda; 2015. <<http://cloud.chambermaster.com/userfiles/UserFiles/chambers/9078/File/1ASEANPost-2015HealthDevelopmentAgendaOutputof3rdSOMHDWorkGroupMeeting.pdf>> [accessed 16.11.16].
- [15] World Health Organization Western Pacific Region. Health services development; 2016. <[www.wpro.who.int/health\\_services/health\\_services\\_framework/en/](http://www.wpro.who.int/health_services/health_services_framework/en/)> [accessed 16.11.16].