

# The Beacon

**NATALIE GLEBOVA**  
IVL BRAND AMBASSADOR  
**BOI FAIR 2011**



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## His Majesty and the Quality of Life of the Thai People

The living standards of his people always have been a concern of His Majesty. Even as far back as the time of his visit to the United States of America in 1960, where he was invited to address the U.S. Congress, His Majesty noted that:

“The average income of a Thai is only about \$100 a year. One will understand what urgent need there is to increase the income and raise the living standard of my people.”

Four years later, His Majesty

initiated the Thai-Israel Rural Development Project in Petchaburi Province. This gained the cooperation and support of the Government of Israel. Together with the Thai Ministry of Agriculture and Cooperatives, research was conducted into agriculture, including marketing.

“To succeed in farming, we must acquire knowledge of agriculture, marketing and elementary economics,” His Majesty noted.

It was His Majesty’s idea to establish a long-lasting self-help philosophy that would be



undisturbed should individuals be forced into selling the land to pay off debts, thereby making their family landless forever after. A new type of land document was issued which gave the families no right to sell the land, though it may be passed on to members of the family as their inheritance.

His Majesty has explained that it is crucial to the principle of helping people to help themselves, for “...it is highly important to encourage and help people in earning their living and supporting themselves with adequate means, because those who are gainfully employed and self-supporting are capable of contributing positively towards higher levels of development.”

## Editor’s Note

In this issue you will see that other than our major theme of the magazine, highlighting our wool business, we will also tell you about the BOI Fair 2011. This year the BOI is arranging the “BOI Fair 2011” during 10-25 November 2011 at Impact Muang Thong Thani with the concept of “Going Green for the Future”. Since Mr. Aloke Lohia has accepted the position of Honorary Investment Advisor to the Board of Investment (BOI) for promoting Indian investors to invest in Thailand, Indorama Ventures has become actively involved in the BOI Fair 2011 with the INDORAMA VENTURES Pavilion in the Industrial Zone. IVL is also promoting young designers by coordinating with Chanapatana International Design Institute (CIDI), to set up the RECO Young Designer Competition 2011.

You can find more details in “Good to Know” column or [www.boifair2011.com](http://www.boifair2011.com) The “Business Culture” column in this issue has given way to more articles on the BOI Fair 2011 and our wool business.

**Sirima Phanomuppathamp**  
Editor

### TPT Petrochemicals Public Company Limited

No. 3, I-7 Road, Map Ta Phut Industrial Estate  
Tambol Map Ta Phut, Amphur Muang,  
Rayong 21150 Thailand  
Tel : +66 (0)38-683-288-98  
Fax : +66 (0)38-683-300

### Indorama Ventures Public Company Limited

75/102 Ocean Tower 2, 37th Floor  
Soi Sukhumvit 19 (Wattana)  
Bangkok 10110, Thailand  
Telephone: +662 661 6661  
Fax: +662 661 6664  
Website: [indoramaventures.com](http://indoramaventures.com)

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### Executive Editors:

Mr. Richard Jones  
Ms. Natnicha Kulcharattham

### Editor:

Ms. Sirima Phanomuppathamp

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### Assistant Editor:

Ms. Naweensuda Krabuanrat

### Editorial Staff:

Ms. Thanawan Tachatiarnjan  
Mr. Saruny Samohbasa  
Ms. Sayumporn Laovachirasuwan

## Mr. Rajesh Banka, COO of the Wool Business



Wool was one of the first businesses of IVL and today commands the respect of the international market for the high quality worsted wool that we create. Indorama Holdings was established in 1994 as Thailand’s only wool company and remains unique in the country. Wool is a premium product that never goes out of style and our niche of worsted wool places us at the peak of the industry. Situated in Lopburi, the company has grown market share over the years on a global scale. A good percentage of the high quality men’s suits in the world are made from our yarn, which is something that the whole Indorama Ventures group is proud of.

The dedication and commitment of our skilled workers and professional team serves the needs of some very important clients across the globe. It is this professionalism that has led IVL to be a world leader and to maintain a reputation for quality. We have achieved excellent labor relations over the years and employee turnover remains relatively low. We are fortunate to have their support. Indorama Holdings Ltd., has received the National Outstanding Industrial Establishment on Labor Relations and Welfare Award for the sixth consecutive year (2006-2011). We are also thankful to our customers and suppliers worldwide for their co-operation and continuous support.

As this issue is about the wool business, I hope that you will find the subject interesting and rewarding to read about.

**Sincerely,**  
**Rajesh Banka**

Chief Operating Officer Indorama Holdings

# Wool, the Wonder Fiber



Indorama Holdings was the first, and remains the only, worsted wool company in Thailand. We started our operations with 12,000 spindles in 1994 and today we have more than 29,000 spindles producing 6,000 tons per annum. To take advantage of the highest quality wool, we have our own top making plant, which transforms wool to high quality tops, which in turn are converted into yarns.

It is our continuing quest to maintain and improve our yarn share in the market. To achieve the highest levels in terms of quality and services, in addition to stringent quality checks at each stage, we adopt other managements systems and tools too, like QCC, 5S, 6 Sigma, ISO, Regular Benchmarking etc. This enables us to attain continual improvement and crafting the finest yarns with motivated work force. For us the blend of technology backed by dedicated and skilled work force creates the best yarn from our manufacturing unit.

Today we have more than 500 products that meet the needs of one and all. Though we are present in almost all the segments, our core strength is super fine and ultra fine weaving yarns, suitable for multi climatic light weight fabrics. In the worsted yarn industry we are seen as the torchbearer of quality and service. With our expanding customer base our product profile has also swelled to cater to changing market needs. We keep ourselves abreast of changes to the business environment and demand pattern. Indorama Holdings has refined its processes and is able to supply environmentally friendly yarns.

We are capable of supplying yarns complying with Oeko Tex Standard, EU Eco-label and GOTS-Organic Wool standards with certification and compliance audits. Very few manufacturing units possess this capability. Propelled by new technologies and inspired by our lofty goal to explore new frontiers, we have added new yarns like Compact, Wool Kuralon and yarn with exotic fibers blends (Cashmere, Alpaca). Knitting and active apparels are the two segments we are actively working to expand our horizon. We have been successful in making inroads in this highly competitive market with specialized yarns like Mercerized, Total Easy Care and Chlorinated wool yarns.

Indorama Yarns can be translated into fabric with wonderful handle, drape and style. It can be worn next-to-skin and has the intrinsic wool properties of natural stretch, breathability, durability, UV protection, odor dispelling properties and is easy to take care of.



## The Luxury of Natural Wool

Wool is still unmatched in the world of fiber. Its complex protein structure is responsible for some rather unique characteristics and provides it with outstanding, all-round performance. Wool is considered the most versatile of all fibres for apparel and one of the oldest textile fibers known to mankind. The basic characteristics of wool found in the Stone Age are still the same even today in the 21st century. Though we have many other textile fibers now, science has not been able to produce anything with the natural properties of wool. Wool remains unique; a masterpiece of nature's design - it is a smart, timeless and versatile fiber choice, with the added advantage of being produced in a natural, sustainable manner. Remarkably, wool has all the intrinsic properties desired for our clothes.

### PRODUCTION PROCESS

There are two distinct methods of yarn production, one called Woolen and the other Worsted. The Woolen production process is shorter and the wool used is coarser with shorter length. Woolen fabrics are used for jackets, coats, skirts, upholstery fabrics, rugs and blankets where bulk and textured finishes are desirable. On the other hand, Worsted yarn is made out of longer and finer wool. Yarn produced from this process is used mainly for high-end, finer, suiting and light, knitted, garments. Worsted fabrics are often more expensive and are stronger and wear better than woolen spun fabric. Worsted fabrics are preferred for trousers, suits, other garments and upholstery fabrics where a smooth finish is required.

Indorama produces yarn using the worsted system

using full-fleece virgin Merino Wools from Australia. Australia is the main source of Merino sheep wools and has systematic controls in place. It is the biggest supplier of wool in the world and 90% goes into making garments.

So you want to make your own wool? This is how we do it!

First, shear your sheep: removing the wool from the sheep is, of course, essential and is performed by professional shearers in Australia. During this process, due care is taken to leave bad portions of the fleece without harming the sheep.

After shearing, the wool fleece is classified in various groups and the cost of wool depends on which group you buy from. Wool from the belly, legs, tail are removed during this process. Raw wool has lots of impurities like dirt and wool grease. It is cleaned, or scoured, mechanically passing it through series of scouring bowls containing hot water and detergent. Later, rinsing and drying is the final part of this process.

Top making is a process where a combination of activities takes place, like carding, gilling and combing. This is performed to obtain continuous fiber strands with negligible contamination and less short fibers. The final output is wool tops. Opening and Carding is a process where wool fibers are disentangled and mixed by passing through a series of large cylinders and rollers covered with wire teeth. Finally, the wool is transformed into a web of fiber and some of the impurities like vegetable matter and burrs are removed. Gilling is a process of drawing the fibers through pins.



This results in parallel and even fiber strands with required fiber thickness and weight. Next, Combing and Re-combing, which is critical in the production of worsted yarns, takes place. Between 20 and 25 slivers are fed into a combing machine, which removes most of the short fibers in the form of noils (i.e. short strands and knots combed out of wool fiber before spinning), and further straightens the fibers, making them lie parallel to each other.

In the next step, Finisher Gilling, similar to the Gill explained earlier, has an additional purpose of blending tops with uniform, linear, density to make them more parallel. The Drawing process then gradually reduces the thickness and mass of the top in three or four stages, to what is called a Roving, from which yarn is spun. Now the spinning starts and the yarn is finally born. During this process, wool strands are Drafted (meaning, reducing the weight with different roller speeds) to the required count and imparting a twist to add strength to the yarn.

After the yarn is wound on cones or bobbins, it has tendency to snarl due to torsion stress created by twisting, making it unusable for the next process. Negative air pressure

using steam, under a controlled temperature, the yarn is set. If colored tops are required, they must be dyed before drawing and spinning, by forcing a dyeing solution through them. After further gilling and combing they are ready to be drawn and spun into yarn. In other cases, the yarn or fabric is dyed according to need.

Winding takes place as the yarn fitted to small tubes to form a Ring frame is wound on larger packages and defects in the yarn are cleared using electronic sensors. Depending on requirements, yarn can be sold either in single form or can be doubled and twisted again. In this twisting process, yarns are plied and twisted to the desired amount of twist, then winding it in larger packages. Knitting is a process of forming fabric by interlocking a series of loops of one or more yarns. There are several types of knitting and adapted forms based on the end use requirements. Finally, Weaving is the process of interlacing yarns usually at right angles to each other. Woven fabrics are constructed using a set of warp yarns, which run down the length of the fabric and weft yarns, which runs across the fabric width.

With the global economy looking grim, IVL is still confident that it can achieve more growth over the next few years based on its Aspiration 2014 business plan. Demand remains high and the company is now planning to move further into the more value-added products within the polyester space. New acquisitions too are leading the company into more innovative products. The movement of cotton prices excited the market for a while but things are returning to normal. For IVL, normal tends to be rather better than many of its peers and as the year progresses, we expect to see solid performance and continued sales growth.

## First Half Results for 2011



IVL declared sales of over US\$ 3,019 million for the first half of 2011, with net profit of US\$ 441 million. Sales in Q2/2011 grew to US\$ 1,692 million, outstripping the US\$ 1,328 million achieved in Q1/2011 by 27% and far outperforming the US\$

737 million in Q2/2010 by 130% due to the extra capacity from acquisitions in 2011 and a feedstock-led rise in prices.

PET revenues rose 132% to US\$2,066 million, from US\$889 million in the same period last year, while the Operating EBITDA climbed 113% to US\$ 224 million, from US\$ 105 million in the first half of 2010. Sales revenue in Q2/2011 increased by 38% QoQ and 163% YoY, due to higher sales volume and higher selling prices. The operating rate in Q2/2011 was negatively impacted due to an unplanned shutdown at IVL's AlphaPet flagship in Decatur, USA, when tornados hit the area.

Polyester value chain prices were volatile in the first six months of 2011, but IVL's Polyester and Wool Fibres

and Yarns business reaped the benefit of cotton's sharp climb, with this segment's sales up 95% to US\$ 400 million. Segment Operating EBITDA of US\$ 68 million in the first 6 months of 2011 appreciated 178% over the same period last year. Sales revenue increased by 12% over the previous quarter and 111% over the same period in the previous year, mainly due to higher selling prices and acquisitions in Indonesia and USA of speciality Polyester assets.

In the first 6 months of 2011 PTA sales rose to US\$ 555 million, 48% above the US\$ 375 million achieved in the same period last year. Operating EBITDA rose to US\$ 78 million in the first 6 months, from US\$ 51 million last year, a gain of 54%.

## Latest News on Expansions



Indorama Polyester Industries' Polyester Fibres and Yarns plant. Under the new project, discarded, or "post consumer," PET bottles will be collected and recycled to produce high quality resin for making containers for consumer drinks; yarns for premium garments of environmentally-conscious brands and colored fibers for automotive and non-woven end applications. The new investment will be able to recycle 36,000 tonnes of bottles a year to make about 28,500 tons of recycled polyester. Wongpanich, Thailand's leading private waste recycler will deliver discarded PET bottles to the Nakhon Pathom facility for recycling.

### Gas Powered Utilities in Indonesia

In order to further reduce the company's carbon footprint, IVL will invest \$6.7 million into a Gas Engine project in Indonesia.

### Entry into Bi-component Fibres in Thailand

Indorama Ventures expects to invest further into the Thai market with a Bi-component Fibers project for Hygiene Applications. The new project will produce one of the key components of such applications by tying up technologically with a well-known company in this field, to make bi-component fibers for hygiene end-use. This project will have a capacity of 16,000 tons per year and will be located in Rayong, on the Eastern Seaboard of Thailand. The project is expected to commence production by the second quarter of 2012.

Indorama Ventures will also invest in another strategic project to make 16,000 tons per year of high quality bi-component yarns at its recently acquired Indorama Ventures Indonesia (IVI) plant (formerly SK Keris) in Tangerang, Indonesia. IVI owns unique technology to make Bi-component yarns (known as FINNE) through a single step process. The company enjoys significant competitive advantage over companies who currently use a two step process and has secured a leading market share in this segment.

Ventures and its partner Sinterama, with plans to take the marque global. The acquisition comprises two manufacturing sites in Germany, at Bobingen, Bavaria, and Guben, Brandenburg with a total capacity of 120,000 tonnes per annum and a plant in Zielona Góra, Poland that will process the fibers and filaments manufactured in Germany.

### New Thai Recycling Plant

IVL will invest in a new recycling plant in Nakhon Pathom Province, near Bangkok, the current location of its subsidiary

### Trevira

IVL successfully concluded the acquisition of German company Trevira GmbH through a joint venture with Sinterama S.p.A. of Italy. Trevira is Europe's market leader in specialist applications of polyester, such as automotive and home textiles. Trevira is a well-known and respected brand amongst both customers and producers of synthetic fabrics with its own patents and technologies. Trevira's knowledge base together with a strong research and development setup will complement Indorama

## IVL to acquire Polyprima in Joint Venture

IVL has signed an agreement to purchase shares of Indonesian company PT Polyprima, a manufacturer of PTA (Purified Terephthalic Acid), an essential raw material used in the production of PET and Polyester fibres and yarns. The agreement, which will initially give IVL 50% of the company follows closely on recent acquisitions in Indonesia of businesses in the polyester value chain space.

PT Polyprima, located in Cilegon, West Java, has an installed capacity of 465,000 tonnes per annum and will help the company to grow its polyester value chain business in one of the most promising markets in Asia. Following debt restructuring with the creditors of the facility, IVL expects its shareholding to be reduced to 41%, with another 41% held by Indonesian Polyester Fibres and Yarns company PT Indorama Synthetics Tbk and the remaining 18% to be held by other investors.

## IVL Board Visit Mexico July 1-3 2011.



The Board of Directors met with leaders of Indorama Ventures Mexico in the commercial offices located in Mexico City. At the end of the day, the board had a dinner with the Honorable Mr. Suvat Chirapant, Ambassador Extraordinary and Plenipotentiary of Thailand for the United Mexican States.

On the second day of their visit, the Directors of IVL had a meeting with leaders of manufacturer facilities located in Querétaro. After a tour of the Querétaro facilities, the Board of Directors was conducted to archaeological site Tula. The largest of the pyramid temples in the site, was surmounted by 15 foot (4.6 meter) columns in the form of stylized human figures. This pyramid has been restored and the tall statues, called Atlanteans (Los Atlantes), have been erected on its summit.

During the last day of their visit, the Directors were in the enormous archaeological site Teotihuacan, located in the valley of Mexico. This site containing some of the largest pyramidal structures built in the pre-Columbian Americas.



On 20 July 2011 Indorama Petrochem Limited, represented by Dr. Nop Siwasilchai, Vice President for Human Resources & Admin., was awarded the Best Manufacturer Award for Safety, Occupational Health and Working Conditions (National Level) 2011 by Ms. Amporn Nitisiri, Director-General

of the Department of Labor Protection and Welfare, Ministry of Labour, at the Eastern Region Safety Week 2011 event at Tawarawadi Hotel, Prachinburi Province. This was the first time the company had joined the program organized by the Ministry of Labour and winning an award at the national level counts as one of our best achievements.

On July 22, 2011, Ms. Prapai Palakawong Na Ayuttaya the representative from IPI-N, presented The Best Manufacturer Award for Safety, Occupational Health and Working Conditions at a national conference, 3rd floor, City Hall, Muang, Nakhon Pathom by Ms. Warunee Phongsivapai, and the Deputy Governor of Nakhon Pathom.



## IRPL Again Obtains "Excellent" Ratings



On July 29, 2011 officials from the Industrial Estate Authority of Thailand (IEAT) and representatives from communities in Map Ta Phut, paid an audit visit to Indorama Petrochem Limited (IRPL) to conduct the 2nd quarterly audit. The audit result was that IRPL again obtained "Excellent" ratings in all topics under the "Pollution Reduction and Mitigation Plan" of the IEAT. The evaluation fell into different categories, including water management; waste management; Air/ Noise management; VOCs, Nox, SO2, green areas inside the plant and working conditions; support to communities; performance of the pollution reduction plan and the accuracy of relevant data and actions following the advice of the EIA Committee.

In the pictures Mr. Santithep, Safety, Health and Environment Manager, representatives from the local media in Rayong (second and third from left), representative from Krok Yai Cha community, Huay Pong community (Map Ta Phut), IEAT Officials (second and third from right), and Mr. Wijit Kamkom, Associate General Manager- Public & Employee Relations.

# BOI Fair 2011

## “Going Green for the Future”



## RECO Workshop



As part of the run-up to the RECO competition, students and potential entrants were invited to join a workshop conducted at Bangkok University August 13, 2011. They were given an overview of the process to manufacture PET and Polyester Fibres and Yarns by IVL Head of Corporate Communications Mr. Richard Jones, followed by workshops on how to produce furniture and fashions from these products by professional instructors from Chanapatana International Design Institute. Over 66 people attended the event.



Indorama Ventures (IVL) will participate in this year's BOI Fair 2011 at Muang Thong Thani, Northern Bangkok from November 10-25 with a large exhibition designed to educate the public about the benefits and uses of recycling plastic and polyester. The Thai Board of Investment (BOI) is a government organization that provides investment privileges to encourage businesses to invest in Thailand. IVL has benefitted from these incentives and accepted an invitation to exhibit after learning that the theme for the fair is Going Green for the Future, which is in line with many of our own CSR projects today.

The BOI Fair is not held every year – usually about once every 10 years – and the last time IVL presented there was 10 years ago now. However, we have pulled out all the stops this year and are building an outdoor pavilion that will contain a fascinating exhibition of the company's history, our products and their end uses. Moreover, there will be a show of home and office furniture made from recycled plastic as well as clothing and accessories.

In order to encourage people to understand how reusing and recycling waste will contribute to the sustainability of the environment, IVL is organising the RECO Young Designer Competition 2011 in conjunction with Chanapatana International Design Institute (CIDI). The competition is in two parts, one for students who design fashion from polyester and the other for students who design furniture from recycled or reused PET. The winner of each section will receive 100,000 Baht in prize money with prizes for runners up and the teacher who assists the winners in their projects.

To highlight the competition for the public, IVL will be joined by former Miss Universe Natalie Glebova as our Brand Ambassador. We can expect a lot of excitement from the public due to her tremendous popularity here. We are asking all corporate executives who were planning to entertain customers or suppliers in Bangkok during November 2011 to make the IVL pavilion one of the must-see venues.



### Highlights of IVL's pavilion

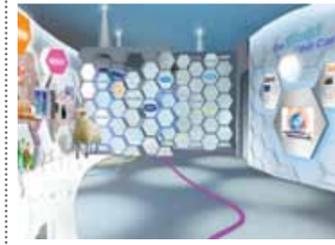
IVL's inspiration for the design of our pavilion was the concept of “For life, for the world, for the future.” We wanted the exterior to look futuristic, with a globe at the main entrance that is made of PET bottles to show that PET and Indorama Ventures, as the world's largest producer of polyester products, are a part of this world.

We designed the interior of the pavilion to take visitors from the history of our company through to the present, with a display of products that most people had no idea were made from polyesters and into the future with an exciting display of the potential for future office and home applications made from reused and recycled polyesters.



### Highlights of Future Zone

The future zone is going to be a very exciting part of the pavilion for all the family as we provide some of the ideas for the future of our daily lives and how people will see more and more recycled products all around them. A display of home and office furniture will be made entirely from recycled PET bottles. Here, visitors will see furniture and fashion items from the young imaginations of students. We want everyone to share their experience with us by uploading photos of our pavilion online. To make things a little bit more “WOW” we will have some rather special artificial intelligence androids to provide the answers to questions.



### Highlights of Past Zone

In the Past Zone, we introduce Exhibits explaining the company's long history, its basic products and the various applications that are made using our products.



### Highlights of Present Zone

The present zone showcases our research and development, revealing to visitors some of the future uses of our innovations. We also highlight the fact that polyester is everywhere in our daily lives even though we often do not realize this. To maintain the futuristic flavour of the exhibition there will be an Interactive Screen that shows all PET applications. Here, visitors can have fun while learning more about PET products.

The Think Next area is set to educate kids about the 3R concepts of reduce, reuse and recycle and about the increasing global concerns about the environment. Just to ensure kids don't get bored, we have a game zone for them to learn while playing.



### Highlights of RECO Competition

As IVL is holding a RECO Young Designers Competition for the BOI Fair, we will have some very high - end costume and furniture designs made from recycled PET and Polyester for people to see how talented young Thai kids are. We will be using this opportunity to encourage the reuse of waste and encourage everyone to

adopt the recycling of post consumption materials as part of their lives in the future.

### Other highlights / activities

To ensure that people are part of our activities, we will be issuing passports and a quiz for them to win B2P pens made from recycled plastic bottles and other gifts. There is a special show at certain times called the Crystal Balance Show and everyone will see and hear musical instruments made from recycled materials.

Another highlight will be a do it yourself (DIY) workshop with Khun “Top” Pipat and a demonstration so people can learn how to make objects from recycled or reused materials.

Finally, our Brand Ambassador, former Miss Universe Natalie Glebova will be on hand for the finale of the RECO competition to add some glamour.

# IVL Activities



On May 13, 2011, AlphaPet celebrated Annual Safety Day. Awards were presented for some individuals and crews for achieving safety goals. Safety Slogan winners are Mr. Connie Comontofski (Parts Room clerk) and Casino White (Warehouse Operator) for "SAFETY BY CHOICE NOT BY CHANCE". The individual exemplifying safety was Mr. Kim Price (Utility Operator). For handling of the tornado situation, Mr. Terry Livingston (Process Shift supervisor) and his crew. For initiative, Mr. Danny Beaty (Mat Handling Supervisor) and his crew for finding a potential problem in a truck and thereby avoid a customer complaint.



On May 25, 2011 OGP welcomed students from LCC university. A presentation and a visit of the plant were held for a group of 42 students, studying international business in USA.

OGP volunteers formed a basket ball team and on May 29 a basketball game between the OGP and MARS teams was played at Neptunas sports hall in Klaipeda. OGP team won 68:50. In the picture OGP basketball team coach Mr. Almantas Lubickas (in red T-shirt) and Captain of the team Arūnas Dabrišius No.77.



On April 25, 2011, the HR Department arranged a Training Class on the topic of "Happy Work Life Happy Work Place" by Phra Maha Sompong Talaputto. The objective of this activity was to encourage our staff to apply Buddhist Philosophy to their daily work, living and also adapt themselves in the workplace and working environment with happiness and effectiveness. The results of this activity are happiness, knowledge and good ideas for their working life.



Every 3<sup>rd</sup> week of each month a group representing Asia Pet (Thailand) led by Mrs. Dhivya Chandrasekar and Mrs. Shubhalaxmi G. Narkar, donate rice, snacks and milk to Wat Thum Tako school. The schools have 120 children. The purpose is to support food & lunch for children for 1 month

April 12, 2011 Indorama Ventures and subsidiary companies donated 569,530 baht to M.R. Piyangsi Watanakun, Assistant Secretary-General of the Thai Red Cross to support flood relief in the South of Thailand.



TPT's CSR team continued to arrange training on the "Waste Recycle Bank Project" to provide knowledge to students at Baan Nong Fab School. This project can reduce waste, keep the community clean and help students to have extra money to support their education.

IRH held a CSR - DIW 2011 ceremony on May 19, 2011 in front of the Production Building. Guests from Ban Bang Yi Nang (Community), Khok Salut Municipal District & Management System Certification Institute (Masci) attended the ceremony and provided knowledge of CSR-DIW to management and employees at the training center.



Mr. Kerdpong Kerdyoo (2<sup>nd</sup> right Back) GAR Manager of TPT Petrochemical Plc., Presented scholarships to students of Baan Maptaphut school on July 21, 2011. Mr. Thirat Supaporn (3<sup>rd</sup> right, back), Director of Baan Maptaphut school attended the ceremony.



On May 12, 2011, Mr. Udon Rattanapun, Operation Sr. Manager (4th from the right), TPT Petrochemicals Plc. welcomes the federation of Thai industries on the occasion of their visit to the TPT Reverse Osmosis Plant.



On May 31, 2011 Indorama Ventures Polymers Mexico participated in the first day of recruitment and labor forum in Querétaro City. A lot of people were interested in the company and applied to be an employee. The representatives from the company Mr. Adrián González, Human Resources and Compensations Head and his team were there.



On June 3, 2011 Indorama Ventures Polymers Mexico led by Mr. Carlos Sierra, Sr. Vice President Mexico (right) and Mr. Anand Agrawal, Chief Financial Officer Mexico cut the ribbon to open their newly renovated followed by Management and employees enjoying canapés and sparkling wine together.

The employees of AlphaPet contributed a sum of approx US \$1,900 towards the American Red to relieve tornado victims in the community. The management contributed twice this amount and the total sum of US 5,500 was presented to the American Red Cross by Mr. Bill Weaver (HR and Safety manager) and Ms. Valerie Coates (Accounts Supervisor) (Center).



Congratulations to QCC: the BEGIN team from the QC&CTS Dept. who were selected by The Association of QC Headquarters of Thailand (QCHQ) under the Ministry of Industry to be a representative of Thailand. They were asked to attend and present their achievement in the International Exposition on Team Excellence (IETEX) 2011 at Resorts World, Sentosa, Singapore on June 14-17, 2011



Indorama Holdings Rotterdam supported a new building for a school in Bodopoda India and replaced all old desktop computers with new computers. The old computers were given to an organization that recycles computer/printer components and an amount of €2239 was received. Indorama Rotterdam decided to donate this amount to the SAC foundation (Stichting Actie Calcutta).



On June 18, 2011 Indorama Holdings Ltd. arranged the CSR project to teach English to children in Khok Salut Community. For this occasion the expat wives and IVL staff volunteered to teach and arranged free lunch for children. The teaching program is arranged every Saturday (for 3 months) from 9:00-11:30 a.m. till September at Wat Klong Mao School.



The mangosteens were in over supply in Rayong market and the price was going down. IVL companies in Rayong IPI-R, IRPL and TPT, supported the fruit farmers by buying 2,000 kgs of mangosteens and distributing all to staff. In the picture Mr. Fotedar and TPT staff help to distribute mangosteens.

IPI-N, IPI-R and IRPL together held a training course on "Indorama We Care for Community Safety". The purpose was to educate villagers about the rules and regulations and driving safety. The representatives from IPI-N and IRPL staff also joined the training and all enjoyed it.



On 25 June 2011 IPI-N and IPI-R concerned about the problem of natural resources and environment, arranged a family day by taking employees and their family to plant mangroves at the Mangrove Forest Resource Development Center 1. On that day we planted 500 mangroves followed by lunch and a visit "Tong - Bai" fruit garden.

Representatives of CSR-DIW from IRH teaching the women's club of Bang Yi Nang Community how to make Camphor Fancy Dolls. The purpose is to help the women's club earn extra money between agricultural seasons.



Mr. Stephen Asquith and his sister Helen an employee of Indorama Polymers Workington participated in the one mile swim in Lake Windermere on behalf of the Royal National Lifeboat Institution. Mr. Stephen's time is of 23.26 mins helped him finish a magnificent 61 out of over 10,000 entrants. Helen finished in 20th position and was the 1st female in a time of 21.56 mins.



His Excellency the Thai Ambassador to Denmark and Lithuania was in OGP on August 20<sup>th</sup> when he planted a tree at OGP. We also attended the Vin d'Honneur celebration after submitting the Ambassadors' credentials to H.E. the President of Lithuania on August 22<sup>nd</sup> in Vilnius.



Mr. O.P. Mishra, head of our Indorama Polymers SP. Z o.o. plant in Poland, paid a courtesy call to H. E. Mr. Andzej Palucki, the Mayor of Wloclawek City. His Excellency was immensely happy to be briefed on IVL's investment.



Mr. Satyanarayan Motha (3<sup>rd</sup> from left) of Indorama Ventures congratulated India - Thai Chamber of Commerce celebrated the 64<sup>th</sup> Anniversary of the Independence of India on 15<sup>th</sup> August 2011.



Factory Mutual is our insurance company at our plant site in Europoort, the Netherlands. Being a loyal customer with almost no claims for many years, we recently received a premium pay back. In the picture Mr. Sunil Baldi, right, Managing Director Indorama Europoort, and Erik Verloop, Account Manager Factory Mutual.



IRPL cooperated with the NPC Safety & Environmental Service Company to hold basic fire training for employees to develop fire fighting skills and use fire equipment to protect against fire.

Mr. Avinash and Mr. Wirat from our Lopburi site welcomed the Deputy Director General of Intellectual Property and his team when they visited the facility's solar farm during the Lopburi, City of Renewable Energy Day on August 4, 2011



Mr. Ashok Upadhyha (2<sup>nd</sup> right) representing Indorama Ventures participated in an exhibition during Lopburi, City of Culture and Renewable Energy Industry Day, held by the Department of Commerce, Lopburi, at the Monnipa Convention Hall on August 4, 2011.

Jun 11 2011, PET group Lopburi support Rad-Cha-Do's community to solve the problem of the common house mosquito.



PT Indorama Ventures Indonesia (IVI), led by Mr. Shin Yong Sig, Senior Vice President (7<sup>th</sup> from right) donated white board, text books, uniforms, school bags, writing books and cleaning equipment to SDN III Cihuni School under the program "IVI Edu Care". The students give a drawing as their thanks to IVI. The drawing is called "Aku Cinta Indorama" (I love Indorama).



IRPL together with all other plants in (AIE) jointly organized the AIE Open House activity 2011. This is the first time of mutual agreement and joint effort among all plants in AIE. The purpose is show the transparency of business and help local villagers to understand the business operations, production and good safety and health management and environment management.

# ART IMAGINE

## Dear Readers,

We are back once again with Art Imagine to present to you some wonderful children with great imagination. In addition to drawing skills, they are full of ideas and creativity. We are sure that their parents are equally proud of them. These fantastic kids certainly perk up our working day.

Our artistic activities this time are at Wat Nong Ta Bak School. Thanks to Ms. Anantaya Phudkrachang, the school director and all the teachers for their warm welcome. We were so impressed. Let's enjoy the kids' work, under the theme of "The Sufficiency Economy"

### From Ta Bak Blossom Village

Wat Nong Ta Bak School thanked TPT Petrochemicals Plc. for arranging "Art Imagine" activities. Not only did the students gain something educational but they also had such a fun time. All the children would love to have the team arrange this lovely activity again, or make merit for their Birthday Program, and are looking forward to next time.

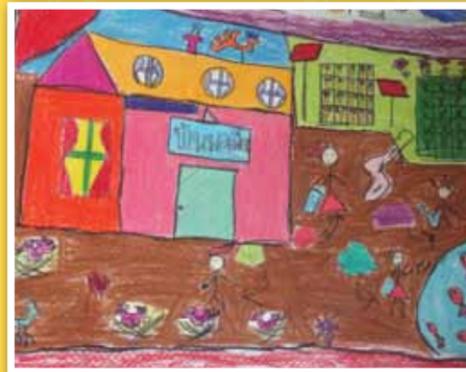
**Content details : Director of Wat Nong Ta Bak School**  
 Tel.08-1761-4485  
 e-mail: Anantaya.p@windowslive.com  
 Address: Wat Nong Ta Bak School Moo 4 Takhun  
 District, Bankhai Subdistrict, Rayong 21120



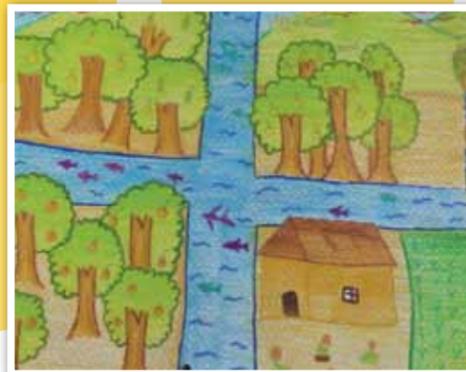
1. Chutima Moichuea



2. Chaichana Sae Loh



3. Methawee Ukrawong



In The Beacon Volume 4 we were telling you about how to achieve higher performance by coaching, where coaching is generally accomplished through a four step process of observation, discussion, active coaching and follow-up that monitors progress. This issue will continue with the last two steps.

### \* Active coaching

A form of mutual agreement is the foundation of coaching, commencing with a mutual commitment between the coach and the trainee how to work together and proceed to achieve the coaching objectives. The step of making agreement includes inquiring into and advocating different perspectives, checking for understanding and agreed together. Correctly understanding what the other person means by the goals and how to arrive there is the essence of making the agreement. If your subordinate cannot understand that there is a mutual benefit, you won't get very far.

Make an action plan which defines the goals and measures of success. Certainly, provide a clear timetable that assists both parties to work together.

### How to Begin

Everyone has a different way of learning and thus coaches should have an armory of methods at his or her disposal. Some people just need to be told what to do directly. "Do this, followed by that" is a step-by-step instruction method that some find easy to understand. Some people can learn best through examples, but **some people can learn best by working hand-in-hand with others.**

For example: John, who needs to learn the use of the spreadsheet and graphic presentation software. His boss, Peter, could have tossed a pile of user manuals on Robert's desk and said, "Study these. They will teach you what you need to know." Instead, Peter set up a projector and screen and asked John to take a seat and show some slide presentation, explain as he moved forward. Some slides summarized customer research findings in short bullet points. Others represented numerical market data in clearly rendered charts: market-share data in pie charts and forecasted cash flows in bar-chart form. John could see how the slide presentation done, when coupled with Peter's narrative, gave company executives the information they needed to make a decision.

"The reason I showed you this presentation," Peter said, "is to help you see the end result of good market analysis--- namely, data arrayed in ways that create insights and communicate those insights to decision makers. If you want to be a market analyst, this is something you must learn how to do."

Peter then went to his files and pulled out a folder of printed spreadsheets. "Here is the data behind the slide presentation you just saw. As you learn how to use DigitCalc, you'll see how you can take data like this and convert it into charts that help people grasp the data more easily."

After some discussion, Peter ended the coaching session. "Here's a tutorial for learning to use DigitCalc," he said as he handed over a CD-ROM. "It will teach you the basics. What I would like you to do over the next week is to use this spreadsheet data to create bar and pie charts like the ones I've just shown. That will be good practice.

If you get stuck, talk to Jenny, who has agreed to help. She's a DigitCalc whiz. When we meet again next week, we'll review your charts. I'll also have some new market data that we can develop into presentation slides"

Please notice how Peter communicated his ideas in a way that John could readily appreciate their value. Rather than expecting John to learn on his own through tutorials, he showed his subordinate a complete example of what John should aim to achieve for himself. The communications between them was done in a way that the trainee found easy to understand.

### As a coach, ask yourself the following questions:

- What tasks are you trying to help your subordinates perform?
- Have you provided them with tangible examples of good work or good practice?
- Have you communicated in ways they can appreciate and grasp?

Your coaching will be most successful if you use a combination of telling and inquiry in your communications. Telling a person what to do and how to do it is usually necessary, and telling or showing people how to do things is also effective and saves time. But learning has a bigger impact when people figure things out for themselves. So instead of doing all the things, ask the other person to tell you something by asking them some questions like these:

- Does this make sense?
- If you had to make a convincing case to a potential client, how would you use this software?
- Which of these charting formats would make the strongest impression? And please tell me why.

Then encourage a person to provide his or her perspective or feedback.

### Tip: Begin with the Easy Things Adopt an Appropriate Approach

There are two basic coaching approaches, and you should adopt the one that best matches the situation. In some cases you must adopt a direct approach.

**Direct Coaching** involves showing or telling the other person what to do; it is most helpful when working with coaches who are inexperienced or whose performance requires immediate improvement.

Other situations call for **Supportive coaching**, here the coach acts more as a facilitator or guide. Support coaching is especially important for those individuals who meet current standards of performance but need to prepare to take on new or greater responsibilities.

Directive versus Supportive Coaching		
Coaching Style	Used For:	Example
Directive	Developing Skills	Instructing a new employee who needs to develop skills in your area of expertise or matching him or her with another coach who has the skills needed
	Providing answers	Explaining the business strategy to a new employee
	Instructing	Indicating the most expedient way to do a task or working together with the employee on a task or project where she can learn from you; for example, a joint sales call
Supportive	Facilitating Problem solving	Helping others to find their own solutions
	Building self-confidence	Expressing confidence that an individual can find the solution
	Encouraging others to learn on their own	Allowing individuals with new responsibilities to learn on the job, even if it means risking mistakes
	Serving as a resource to others	Providing information or contacts to help others solve problems on their own

### \* Follow Up

Effective coaching includes follow-up step, by checking progress and understanding. Set a date for a follow-up discussion. Check the progress that the individual has made. Continue to observe, ask how the other person is doing and what you can do to help. Identify possible modifications to the action plan. Ask what worked and what could be improved in the coaching session. Follow up can be prevent backsliding, reinforce learning, and continue individual improvement.

Reference: Harvard Business Essentials, "Coaching and Mentoring"

# Water-based Flame Retardant Protects Fabric



Fire retardant fabrics are textiles that are resistant to fire through chemical treatment or purposely manufactured fireproof fibers. Penta brominated diphenyl ethers (pentaBDE) were the most popular flame retardant before 2004, used in baby products such as car seats, bassinet mattresses, nursing pillows, high chairs, strollers, and other products that contain polyurethane foam.

Natural fabrics can easily catch fire and burn swiftly. Flame retardants make it more difficult for fabrics to ignite. They burn slower and make the fabrics self-extinguish when the flame is removed. That margin of safety is especially important for clothing fires, which can cause severe and disfiguring injuries. Flame retardants allow time to remove the clothing or put out the flames.

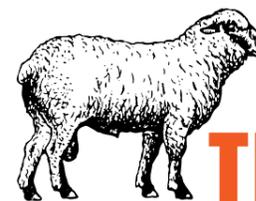
Some polyester fabrics are considered permanently fire retardant because fire retardant properties are built directly into the molecular structure of the fibers. Other synthetic fabrics may be considered durably fire retardant, fire retardant, or non-fire retardant. Durably fire retardant refers to a process in which polyesters are chemically treated during the manufacturing process with a soluble non-water chemical. In other cases, synthetic fabrics may be topically treated with chemicals after the manufacturing process, or may be untreated (or untreatable) and therefore considered non-fire retardant.

Science Daily reported on Sep. 1, 2011 that people are more concerned about the potential toxicity of flame retardants that are currently used on a variety of products, especially children's pajamas and the foam in children's car seats. Modern water-based ingredients are much less toxic than 'halogenated' or 'brominated' flame retardants used in the past, and they are more environmentally friendly.

For many years used to fireproof exposed interior steel beams in buildings, a technology called 'intumescence' is an environmentally friendly flame retardant. When touched by fire, intumescent coating swells and expands, forming tiny bubbles in a protective barrier that insulates and shields the material below. A polymer-based 'nano intumescent' is believed to have potential for use as a flame retardant on clothing.

Nano intumescent material is super-small, built up from layers of alternating positively and negatively charged polymers so thin that roughly 50,000 would fit across the width of a human hair. Because these layers are so thin, the polymer liquid seeps deep into material and onto each individual fiber. Today's flame retardants settle on fiber bundles like a shield and, while slowing the flames from spreading, still allows the fabric to burn so that it turns black. When the new nano coating is exposed to a flame, it expands slightly and stops the fire from igniting and burning the fabric.

Researchers plan to test the coating on other materials, such as polyester and foam, possibly with commercial partners. New, layered, films might provide safer alternatives to commonly used halogenated compounds that are being phased out because of toxicity concerns.



## The Sport of Shearing Sheep

Believe it or not, sheep shearing has developed its own culture over time and has progressed from being a grueling task performed on rural farms to an elite sport. People travel long distances to witness a sheep shearing contest. In June 2010, 111 machine shearers and 78 blade shearers shorn 6,000 Merino ewes and 178 rams at the historic 72 stand North Tuppall station in Australia. More than 10,000 visitors witnessed this event.

The method of shearing has changed over the years and many now use what is called the Bowen technique to remove the fleece from the sheep without double cutting the wool fiber or causing injury to the animal or self, all at speed. Judges closely watch, monitor and assess these key aspects.

Competitions are held around the world, chiefly in Ireland, the UK, South Africa, New Zealand and Australia. The first World Championships were held in England in 1977, and the first Machine-Shearing winner was Roger Cox from New Zealand. As sheep shearing is tough work, speed shearers, for all types of equipment and

sheep, are usually very fit sportsmen.

Today, large flocks of sheep are shorn by professional shearing teams working eight hour days. Most shearers are paid per sheep sheared. Shearers who "tally" more than 200 sheep per day are known as "gun shearers." Typical mass shearing of sheep today commences with a sheep being caught by the shearer from the catching pen and led to his area of the shearing board. It is then shorn using mechanical cutter. The shearer begins by removing the sheep's belly wool. A professional or "gun" shearer typically removes a fleece without badly marking or cutting the sheep in two to three minutes, depending on the size and condition of the sheep, or less than two in competitive shearing. The shorn sheep is moved from the board via a chute in the floor, or wall, to a counting out pen.

The wool is removed, thrown onto the wool table, then skirted to remove unwanted parts of the fleece. The removed pieces largely consist of shorter, seeded, burry or dusty wool, which is still useful in the industry. As such they are placed in separate containers and sold along with fleece wool.

Next, it is folded, rolled and examined for its quality, known as wool classing, which is performed by a registered and qualified wool classer. Based on its type, the fleece is placed into the relevant wool bin ready to be pressed when there is enough wool to make a wool bale.

Originally, people used shears, called blade shears, comprising two blades arranged similarly to scissors except that the hinge is at the end farthest from the point (not in the middle). Blade shears are still used today but leave some wool on a sheep. Blades are more commonly used to shear stud rams.

Today, machine shears, known as handpieces, operate like the hair clippers in a barber shop. The original machine shears were powered by a fixed hand-crank linked by a shaft universal joints. Electric motors on each stand have generally replaced overhead gear. The arm is often replaced with a flexible shaft. Smaller motors in the handpiece have been created but these are generally not used by professionals as the weight and heat of the motor becomes inconvenient with long use.





# Bobingen - Ausberg

## Trevira and Environs

Trevira GmbH, is a manufacturer of branded polyester fibers and filament yarns. The company was acquired on July 1, 2011 and is officially a subsidiary of Trevira Holdings GmbH, a joint venture of Indorama Ventures PCL and Sinterama S.p.A. Werk Bobingen (the Bobingen factory), which had belonged to Hoechst since 1952, started production of staple fibers in polyester in 1954. Hoechst initially distributed the new fiber under the Diolen trademark. First production of the new fiber in 1956 amounted to just 5,000 tonnes, becoming over a million tonnes worldwide by the time restructuring came about in 1996.

In the seventies it took over texturers Ernst Michalke and Kaj Neckelmann in Denmark (today Trevira Neckelmann). In 1987, the American Celanese was added. The new fibers were used in clothing, home textiles, technical applications and nonwovens. The Trevira brand products were even used by famous designers like Lagerfeld, Castelbajac and Piattelli. At the end of the seventies, the business gradually changed from commodities to specialized functional fibers and yarns. The product range extends from drapes, decorative and upholstery fabrics, to carpet fibers. In 1980, Trevira CS, a flame retardant fiber, was launched and Trevira became the market leader. Changes in ownership since 1996, restructuring, transfers and the closure of sites, took

Trevira from a former division of the world's largest polyester supplier to a European manufacturer of textile specialty products.

The head office is located in Bobingen, in Bavaria, Germany. It is on the edge of the Augsburg-Westliche Wälder Nature Park, founded in 1988, 13 km south of Augsburg and covering an area of 1,175 km<sup>2</sup>. The gentle, hilly landscape is divided by the streams Schmutter, Neufnach and Zusam and is part of the hills between the Danube River and the Bavarian Alpine Foreland. Nearly half of the region is forested. Bavaria shares international borders with Austria, the Czech Republic and Switzerland. Readers might know that Bavaria is home to BMW and Audi, Allianz, Grundig, Siemens, Adidas and Puma. Of course, Bavaria is also famous for the quality (and quantity) of its beer, and Bobingen is not unusual in having its own brewery.

Originally called "Pobinga" a thousand years ago, Bobingen industrialization commenced in 1899 with a rayon factory. In 1969 it became a city. Bobingen now belongs to Augsburg district. As Augsburg is strategically located on a major trade route the city includes major historical sites. Augsburg museums include the house of Leopold Mozart (father of Wolfgang Amadeus Mozart), the Fugger banking center museum and both Catholic and Protestant churches dating back to the 9<sup>th</sup> century. A visit to the famous marionette theater is a must as well as several sites significant to the Protestant Reformation, including sites associated with Martin Luther.

An amusing story is part of the local character of Bobingen. It says that, once upon a time, there was a young man from Bobingen who was being prosecuted and requested a lawyer in Augsburg to fight his case. The lawyer advised the young man to behave like an idiot in court. He was to answer every question by saying "Bobingen zu," which is nonsense, at the same time pointing with his right hand under his nose from right to left. He did as he was advised, and by this method he did not confess or admit to anything, he was released. One day, while in town on business, he met the lawyer, who was curious to know the case's outcome. After hearing of the acquittal, the lawyer said "It is now time for you to pay me for this advice; I demand two Karolins (coins)."

The young man, however, replied "Bobingen zu" and walked away without paying anything.

# IVL's Cure the Mangrove Forest, Green the World Project



Mangrove forests in Thailand and around the world are being destroyed at a high rate. Volunteers have been participating in a range of activities to counteract the negative impact of deforestation, in particular seed collection and planting with local communities.

Mangrove forests protect tropical coastal areas from erosion. The massive root system of a mangrove forest dissipates wave energy, especially from storm surges and Tsunami. Mangrove roots slow down the tidal water with the roots trapping the ocean sediment during the daily tidal cycle. In this way they stabilize land elevation by promoting sediment buildup in tidal areas.

The unique ecosystem found in the intricate mesh of mangrove roots offers a quiet marine region for young organisms. In Thailand, many species of commercially important fish rely on mangroves as a nursery. Other organisms supported by the mangrove root structure include algae, oysters, shrimps and crabs.

Mangrove wetlands also provide habitat, prime nesting and migratory sites for hundreds of bird species. Other species, though not permanent mangrove inhabitants, make use of mangrove areas for foraging, breeding, and other activities.

Mangrove forests were destroyed by some activities; the charcoal and timber industries have also severely impacted mangrove forests, as well as the developing tourism industry and other coastal developments. Finally, the rapidly expanding shrimp aquaculture industry poses a threat to the world's remaining mangroves.

Since the amount of many species for commercial fisheries has been reduced gradually, Indorama Polyester Industries Plc. (IPI-Rayong) arranged the Mangrove Forest Planting Project by planting 500 mangrove trees on the empty land next to the beach near the Rayong Mangrove Forests Resource Development Office, Ministry of Natural Resources and Environment to increase the Mangrove Forest area. Hopefully the outcome of this project will help protect and maintain the amount of fisheries in this area. This CSR activity was held in the morning of Saturday June 25, 2011 at Nernkhor, Klaeng District, Rayong Province with more than 150 people joining including employees' families and the management team.

The achievement of this CSR Project, called Mangrove Forest Planting, was not just an increase in the area of the mangrove forest but employees who joined have realized how important conservation, is learned about the value of mangrove forests and worked together with good team cooperation, They were also happy volunteering to participate in environmental conservation.



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[www.indoramaventures.com](http://www.indoramaventures.com)