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#### Sustainable Interior Design is Evolving -

With rising awareness of how valuable natural resources are, we are finally seeing a shift in human perception as we start prioritizing our environment over the goods we consume. As consumers, we now insist that the products we buy are made of sustainable materials and we're more than ready to boycott companies and their brands if they refuse to step up to fight climate change. Moreover, around 75% of millennials are willing

As a result of this, companies that conduct their business in a socially and environmentally responsible manner are more successful as consumers hold them accountable by way of purchasing choice and power. In the world of interior design, this opens up new pathways of contributing to a healthier planet by using eco-friendly materials in design projects. The following are



### Call For Climate-Positive Design

It's common knowledge now that every product made leaves a carbon footprint and affects the climate. The choices that companies make regarding materials, manufacturing processes, chemicals, packing, transport and waste disposal all impact both human and environmental health. In this day and age, our role isn't only to decrease the carbon footprint, but it's also about a call for climate-positive design that helps in neutralizing carbon emissions and creates a healthier environment inside and out.

Fortunately, news from around the globe show a rapid increase in efforts invested by suppliers to improve their products' environmental impact. Whether they're going for waste reduction, water conservation, carbon emission reduction or energy efficiency, interior designers are joining in and giving their contribution to the climate-positive design by taking a more wholesome approach to the product story. As this progressive master's degree in product and interior design teaches, experimenting with different approaches to design is of utmost importance and in doing so, each designer needs to learn not only how to design functional and comfortable spaces, but also all about material recycling and environmental economics of products.

### Moving towards a circular economy -----

Looking back, our world has always followed the linear economy of a take-make-waste concept and it's been going on longer than most would like to admit. However, the idea of simply throwing out old interiors and replacing it with brand new design is off-trend. The concept of a circular economy is based on the principle of keeping the materials and products in use and regenerating the natural systems with no waste and pollution. Nature itself creates no waste and it gives purpose to everything so circular economy tries to do the same - give specific purpose and function to everything and puts it to use in a continuous loop.

By carefully selecting materials and products, designers of today are able to make a positive impact on the circular economy and support a healthier environment. For instance, a commercial flooring company used by designers from around the world can make a substantial contribution to the preservation of our planet by using yarn made of recycled fishing nets and still create carpets that aren't only gorgeous but also help in cleaning up the oceans, reducing carbon emissions and aiding third-world economies.

### Revealing meaningful stories –

One of the most compelling ways to support the circular economy and achieve climate-positive design is by making the personal change and inspiring others through your example. Authentic storytelling holds great power and when companies share real-life examples of their practices and deliver on their

01 INTERIOR

Sharing positive stories with consumers that reveal the company's sustainable practices that support a healthy environment and healthy communities helps increase their brand identity. This kind of transparency across companies and their supply chains also help brands satisfy the global demand for healthier

ideas listed here, interior design can also help in creating a

## PROPOSED PERAK HI-TECH PARK (SILVER VALLY TECH PARK)



The Silver Valley Tech Park (SVTP) is part of the Greater Ipoh - Taiping - Pangkor Corridor. It's close proximity to Ipoh and Meru Raya, is driving as a technological game changer for Perak's economy and industrial development.

The SVTP physical framework is a bespoke framework designed to ensure the comprehensiveness of the Park's ability to achieve its aspiration, a 1,371 acres high-tech industrial park for work & play, embedded with smart park initiatives and comprehensive sustainable approach.

The multiple helix model is used to directly communities and society at the core of its innovation activities ensuring long-term while ecological and environmental resilience of SVTP.

SVTP focuses on encouraging

high technology industrial activities that support environmental sustainability design and development activities. The design concept of the master plan is based on strong sustainable design principles that will ultimately improve lifestyle and create a significant identity to SVTP and

SVTP's sector strategy and its land uses are designed and configured to provide an inter-link and efficient ecosystem between the proposed sectors and the industrial plots are structured in a modular configuration concept to provide flexibility to the investors.

## 21st Century Manufacturing model

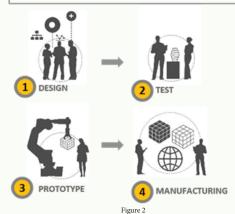
SVTP physical framework is designed to ensure the comprehensiveness of the Park's ability to achieve its aspiration of: i. Work & Play

Figure 1: SVTP location.

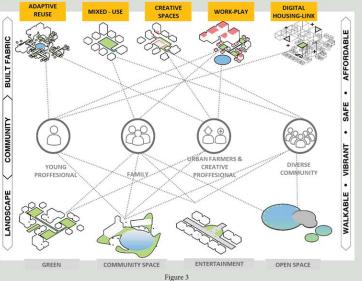
ii. Smart Park Initiatives

iii.Holistic/ comprehensive sustainable approach between nature, buildings & technology

iv. Leverage technologies to improve park's sustainability



#### **Program Development and Spatial Planning Strategy:** 02 PLANNING DIGITAL

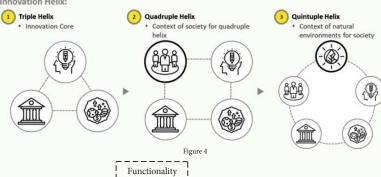


The foundation of SVTP is based on Quintuple Helix model (Figure 4), which directly involves communities and society at the core of its innovation activities while ensuring long-term ecological and environmental resilience.

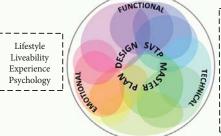




#### Innovation Helix:



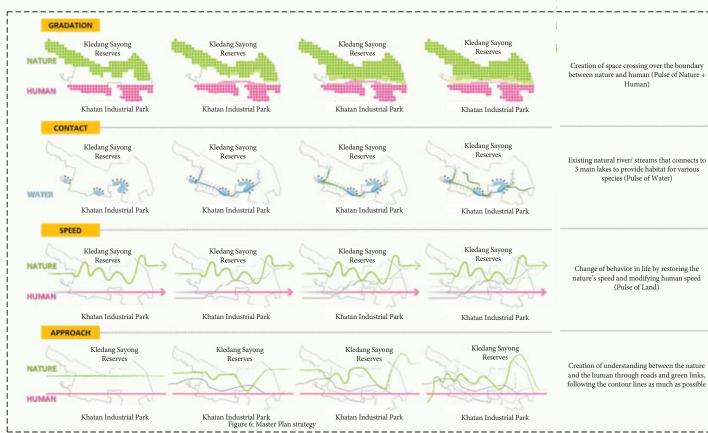
Flexibility Reliability Usability Efficiency Creativity

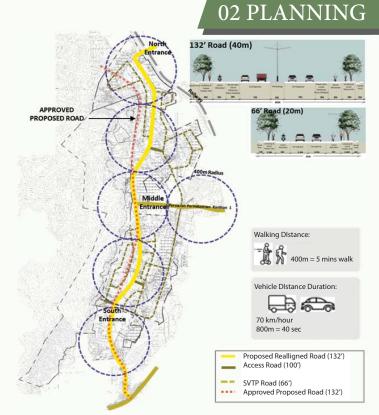


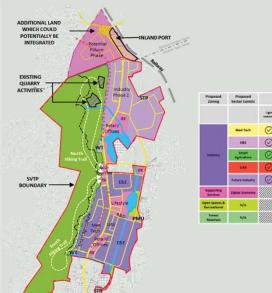
Planning, Architecture, Engineering, Landscape, Construction, Energy, Water & Waste

> Inclusive Design Universal Design Flexible Design System Design Smart Design

Figure 5: Master Plan principles.







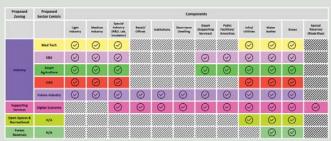
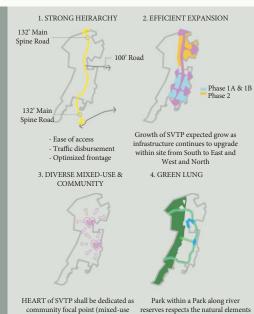


Figure 7: SVTP proposed zoning and its components





development components with R&D

as core, that create strong identity and

lifestyle

: 9: SVTP site strategy is to ensure the development expar emphasis on connectivity, promotes diversity and celebra

and also enhance its value by

connecting 3 main waterbodies



- The bigger plots should be surrounded by internal road (service road) to allow flexibility for each plot entrance (when subdivision takes place)
- Number of smaller plots should be arranged in a cluster form to (with minimum number of 4)
  - Allow for
  - amalgamation of plots
  - To ensure the minimum distance between 2 junctions is 46m



Figure 10: The industrial plots are structured in a modular configuration concept to provide flexibility to the investors







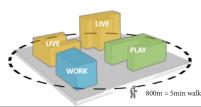




A mixture of land uses/ components will enhance the local economy by densifying and diversifying the design of community:

- Residential Units
- Neighborhood commercial
- Public amenities
- Open space

Mixed use neighborhoods and integrated uses that compliment within its area that will favor short trips by foot or bike.



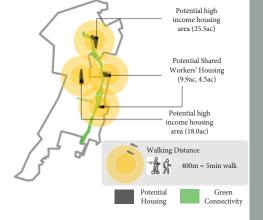
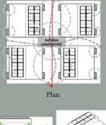


Figure 11 (a): Potential areas for future housing components (high-income dwellings & shared workers' housing) to complete the diverse mixed development of SVTP





Side Elevation



Figure 11 (b): An example of high-rise shared workers' housing that can be designed to provide open-ness with integration of elevated/ above ground green space

#### 2. WORK -----



## 02 PLANNING



Figure 12 (b): Iconic buildings using eco materials that integrate with surrounding natural elements and other distinctive features to attract anchor tenants

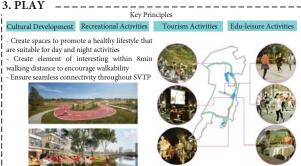


Figure 13 (a): Establishing SVTP to be the PREFERRED location offering a unique experience for the youth or skilled talents. Integrate existing natural elements with the man-made facilities to create a harmonious environment



To allow connectivity through green elements throughout SVTP as well as

Green Spine that will keep SVTP connected

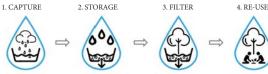
to protect the existing natural elements

Figure 13 (b): Add value by creating a linear park along the river reserves \*\*\*River Source Detention Pond/ Recreation Lake



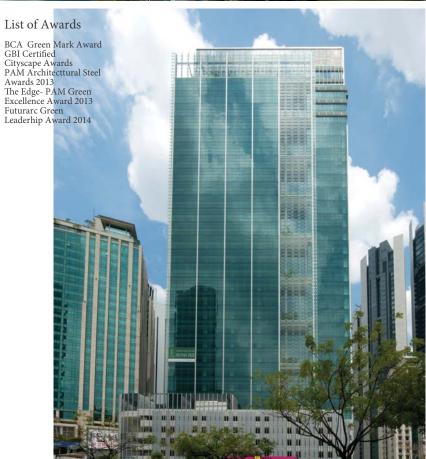
Figure 13 (c): Integrate existing natural elements with the man-made facilities to create a harmonious environment

#### Water Catchment Treatment



floodwater and allow stormwater into park infiltration for ground

Open grass areas detain Diverse planting systems Filtered water cycled and clean stormwater back for park landscape irrigation





## 03 ARCHITECTURE

The first GBI rated high-rise office building in Malaysia, this uilding is 36 storeys high with 4 basement carparks. The building's massing is a neutral box given the treatment of a clear frameless glass curtain wall, punctuated by triple volume ascening sky-gardens designed to give relief to the office spaces beyond. This void carries the same visual weight as its translucent backdrop, becoming a strong compositional element in its own right. The 5 uppermost levels are stepped back to lighten this shift in focus. Details are subdued and minimal.













# MENARA BINJAI

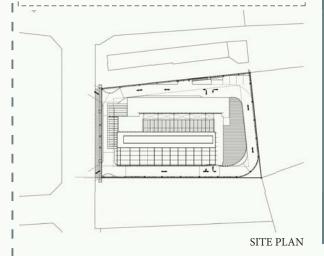
Project Certification Design Assessment Date of Issuance

: MENARA BINJAI

: GBI , BCA Green Mark Gold

: Local GBI Certified

: 30th December 2010, 21st September 2010



**Active Features** 

1. Lift System
Destination based lift system with regenerative power
recovers up to 30% of the energy used or
25,000/kwh/year.

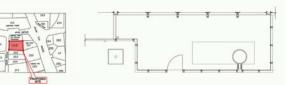
2. Air-Conditioning System
Energy saving chillers for the central air conditioning
system. The Air Distribution System Handling has
achieved 0.317W/CMH, using a Variable Air Volume
System. Having a Carbon Dioxide Monoitoring
system to control fresh air intake help reduce energy
consumption and monitors indoor air quality.

3. Photometric sensors Efficient lighting strategy adopted for the project, with photosensors placed at strategic window areas.

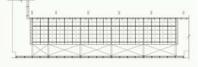
Water-efficient sanitary wares and fittings.

5. Lighting controls every 320sf. Motion sensors for lighting are installed in lobbies, toilets, parking driveways and stairwells. Daylight sensors installed on perimeter of the office to auto switch down artificial lighting during working hours to encourage use of natural daylight.

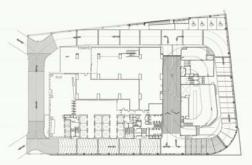
Curtain walls fitted with double-glazed low-e glass with low reflective coatings for optimum heat and sound insulation. The calculated Overall Thermal Transfer Value (OTTV) is 49.85W/m2.



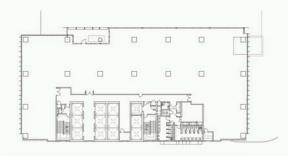




ROOF GARDEN CANOPY PLAN



LOCATION PLAN



GROUND FLOOR

TYPICAL OFFICE FLOOR

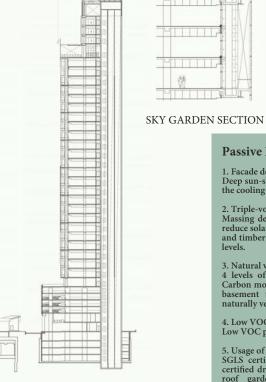


EAST ELEVATION

NORTH ELEVATION

SOUTH ELEVATION

WEST ELEVATION



**SECTION** 



ROOF GARDEN CANOPY SECTION

#### **Passive Features**

Deep sun-shading fins on the east and west facade reduce the cooling load of the building.

2. Triple-volume sky gardens Massing design with narrow frontage on east & west to reduce solar heat gain. Glass walls fronting all sky gardens and timber louvres on the roof garden modulate daylight

3. Natural ventilation

4 levels of podium car-parks are naturally ventilated. Carbon monoxide sensors & ductless fans are used at the basement to modulate ventilation. All staircases are naturally ventilated.

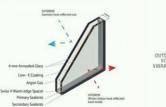
4. Low VOC material

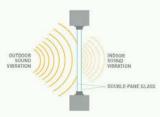
Low VOC paint and coating throughout the buil ding

5. Usage of sustainable building products SGLS certified Ceiling boards for all office area.SGLS certified drain cell for landscape for all sky gardens and roof garden. Recycled Waterproof membrane for landscape on all sky gardens and roof gardens. Recycled timber decking & outdoor furniture at level 32 roof garden and 8 levels of sky gardens. Recycle of existing trees for interior finishing at lift lobby, reception, pagels, and interior finishing at lift lobby reception panels and

#### Overview

Curtain walls fitted with double-glazed low-e glass with low reflective coatings for optimum heat and sound insulation. The calculated Overall Thermal Transfer Value (OTTV) is 49.85W/m2.

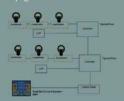


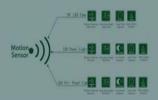


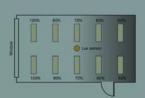


#### Lighting

Individual lighting controls every 320sf. Motion sensors for lighting are installed in lobbies, toilets, parking driveways and stairwells. Energy efficient lighting such as T5 flourescent lights with high frequency ballast are used for offices, corridors, carpark, staircases and services rooms. The overall energy consumption is 27% lower than what is the minimum benchmark in the code of practice. Daylight sensors installed on perimeter of the office to auto switch down artificial lighting during working hours to encourage use of natural daylight.

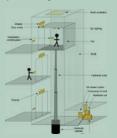




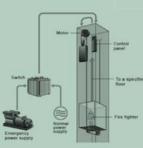


#### **Lift System**

Destination based lift system with regenerative power recovers up to 30% of the energy used or 25,000/kwh/year. 12 Regenerative Ecodisc drive forall passenger lift.

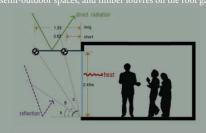


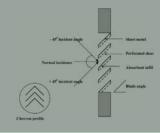




#### Passive Design Feature

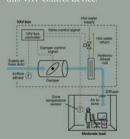
Triple-volume sky gardens. Massing design with narrow frontage on east & west to reduce solar heat gain. Deep sun-shading fins on the east and west facade reduce the cooling load of the building. Glass walls fronting all sky gardens and roof terrace and green planting create a comfortable microclimate for these semi-outdoor spaces, and timber louvres on the roof garden modulate daylight levels.

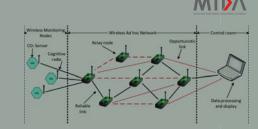




### **Air-Conditioning System**

Energy saving chillers for the central air conditioning system. These chillers have been recognised by MIDA for their energy efficiency. Chiller plant efficiency is 0.645kW/ton. The Air Distribution System Handling has achieved 0.317W/CMH, using a Variable Air Volume System. Having a Carbon Dioxide Monoitoring system to control fresh air intake help reduce energy consumption and monitors indoor air quality. Electrical submeters are linked to BMS for logging and monitoring. In other words, the air conditioning system is capable of providing zonal control for approximately 600sf of office space via this this VAV control device.



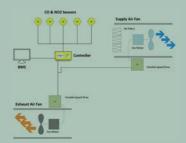


#### **Natural Ventilation**

4 levels of podium car-parks are naturally ventilated. Carbon monoxide sensors & ductless fans are used at the basement to modulate ventilation. All staircases are naturally ventilated.

Ductless system : Less equipment and Lower installation cost





#### **Water Efficiency**

Water-efficient sanitary wares and fittings.





## Usage of sustainable building products:

- SGLS certified Ceiling boards for all office area.
- SGLS certified drain cell for landscape for all sky gardens and roof garden
- Recycled Waterproof membrane for landscape on all sky gardens and roof gardens.
- Recycled timber decking & outdoor furniture at level 32 roof garden and 8 levels of sky gardens.
- Reuse of existing trees for interior finishing at lift lobby reception panels and furniture.
- Low VOC paint and coating throughout the building

From these elements, the building uses 25-35% less energy with a Building Energy Index (BEI) of 150kWh/m2 per year compared to the average office building of 220-240kWh/m2 per year. This relates to an annual reduction on power usage of over 2,000,000 kW. The building utilizes 33KV intakes from TNB; giving a higher level of power reliability and stability.









www.ungcmyb.org

35 years. 12,783 days.

Too often we overestimate what we can achieve in days but underestimate what we can aspire to in decades. What would you have done in such a long time?

If sustainability/ESG is clearly and successfully expressed in the built form that surrounds us, it will eventually become internalised and a lesson for all to learn. As such, we believe that, as the designer of the built environment, we have a tremendous responsibility to be a sustainability leader in society through which we express our core values, namely I for Ideas, D for Design, E for Environment, A for Audacity and lastly S for Service.

In a larger construct of our Environmental, Social and Governance (ESG) goals, our strategies can be summarised into our Core Purpose – which is To Improve the built environment for the advancement of humankind and be broken down into 5 components:

### 1. Green Check -----

In terms of our actual design work, We are proud to have designed more than 35 green rated projects globally which are certified to the highest standard. But, this is not about "trophy collection" because it doesn't come easy. More often than not, our green advocacies are met with resistance and questions from the clients. And that is exactly our responsibility to educate and convince them the greater good of sustainable building design.

In order to do that, we have created our own set of internal sustainability guidelines called GreenCheck to ensure that all buildings designed by VERITAS will achieve a minimum sustainability index, even if the owner/Client declines to pursue a third-party green rating certification. Currently, our minimum "passing mark" is only 60%, but we plan to gradually increase this so that by 2030, every project we design will obtain at least an 80% grade.



35+ GREEN RATED PROJECTS GLOBALLY CERTIFIED UP TO PLATE

#### 2. VE





VERITAS

Another manifestation of our commitment to environmental sustainability is the formation of our wholly owned subsidiary VERITAS Environment Sdn. Bhd. This specialist engineering company focuses on energy efficiency and reduction of waste and contributes their expertise to all our projects. While other architects promote their designs as being "green" without any quantitative justification (i.e. green-washing), the ability of VESB to accurately calculate the predictive energy consumption (in kilowatts/ square meters/year) and water consumption in litres per year, offer VERITAS a competitive advantage. Combined with the inputs of our GreenCheck, we can proudly announce that our projects are truly sustainable and quantify them accordingly.

## **04 ENVIRONMENT**

#### 3. VFE -----

The social aspect of our corporate sustainability strategy is relationships and interactions with our stakeholders in society: our Clients, end-users, regulatory/government authorities, NGOs, students etc. This is primarily manifest in the VERITAS Fund for Excellence (VFE). The VFE conducts several CSR projects annually, directed toward 3 sectors: environment, education and design. However, the VFE strategy is almost never about just writing checks. It is about also engaging with and leveraging the VERITASians themselves, our Clients, students and NGOs in our CSR activities.





#### KAMPUNGKU 3.0 Taman Negara, 2020

Since 2018 VERITAS took part in the Kampungku project which main objective is to bring solar powered light to the rural indigenous villages in Malaysia. On the 12th and 13th of September 2020, a group of VERITASians, employees of Haskell s/b and members of the NGO ECOMy formed an expedition to Taman Negara for Project Kampungku 3.0, a renewable energy initiative aimed at bringing artificial lighting to orang asli villages across rural Malaysia. In addition to VERITAS and Haskell, EcoMy's partner for the third year was Lewis & Clarke College of USA.

The VERITASians worked with the indigenous tribes of Kampung Atok to educate the tribal communities on correct usage of photovoltaic panels to provide artificial lighting. The team also brought grocery supplies for the 23- family village.

#### 4 CARE

On the other hand, within VERITAS, We track our carbon footprint or other equivalent metrics on a monthly basis with quarterly progress reviews under the CARE Scheme (Cost Awareness and Responsibility toward the Environment). This scheme encourages reduction in Internal Combustion Engines vehicular use, Electricity Consumption and waste creation by our staff. We establish metrics to track the reduction and translate into financial savings. The savings arising therefrom -- are returned in the form of quarterly cash incentives to the staffs who use Public Transport. It is our objective for every ringgit we manage to save, we give back the same ringgit to our staffs, so that the participation is from the bottom of their hearts. In 2022 we plan to install roof-top photovoltaics and vegetable garden and a bicycle parking rack to help accelerate our CARE metrics.





#### 5. VLS



Another aspect of our social contributions is the VERITAS Lecture Series (VLS); an annual conference open to our Clients, business associates and co-consultants by sharing useful industry information and unique learning experiences. The lecture topic almost always relates to the environment and improvement of the public realm and attendance is free. The topic this year is "ESG for the Built Environment". The built environment is an especially complex yet exciting arena for these ESG factors to play out because we all know that the real estate development and construction industry are highly influential upon the well-being of any economy due to its size and the multi-tier supply chain delivery structure. Especially in the environmental aspects of ESG, corporations involved in development and construction bear a great responsibility to

and construction bear a great responsibility to mitigate the impact of their operations. As such, they also may be the biggest beneficiaries of adopting ESG best practices. The VERITAS Lecture Series '22 will explore these issues in a one-day conference, bringing together thought leaders from industry, regulatory, non-governmental and academic sectors. Case studies on successful ESG transformations will be presented and moderated sessions will trigger lively debate about the dangers of "ESG-washing" and the future of ESG-rating systems.

## 05 LANDSCAPE

# Did you Know, the earth has more than 80,000 species of edible plants?"

The earth has more than 80,000 species of edible plants. Plants are really important for the planet and for all living things. Plants absorb carbon dioxide and release oxygen from their leaves, which humans and other animals need to breathe. Living things large to small need plants because they eat them and live in them.

If you're ever in the mood to try something new, the good news is that there is certainly food you haven't tasted yet growing somewhere in the world

# 90% of human foods are from jus 30 plants

Out of tens of thousands of plants, we could eat, mankind chooses to consume only about 30. It's crazy to contemplate how limited our diets are compared to all of the different foods we could be eating.



# 2 Over half of plant species are native to one country

Chances are, a plant you find in one part of the world is not currently growing anywhere else. As plant habitat is ruined, there's little point in hoping that the killed plants could be found and harvested somewhere else in the future.



# 70,000 plant species are used for medicine

As it turns out, humans armore diversified in the plant we use for medicine.

Although a large portion of th figure applies to tradition medicine, modern medicine not exempt from plant help



# 4 Nutrition doesn't factor into crops we do mass produce

The world's largest farmers have pursued certain crops because they can grow a lot of them more quickly, easily and inexpensively to turn a better profit. As a result, most of the most healthful plants stay off of our dinner plates because they aren't available at grocery stores.



# Just 10% of the plant-rich areas are protected

Of the most biodiverse areas on the planet, only 10 percent are officially "protected" to ensure the survival of a multitude of species.



## Top 10 Edible Plants To Grow At Home:

At the start of the New Year, many people make resolutions in search of peace, health, balance, and for other reasons. Often, these are tough promises to adhere to and studies show that only eight percent actually stick with their vows. So why not make it easy and choose resolutions for the garden? Resolve to grow your own vegetables and eat healthier in the New Year. Get your family and friends involved in planning ways to include gardening into your lives.

Thanks to the tropical climate in Malaysia, setting up a garden is easy because we don't have to deal with frosty winter weathers. Even if you have only a small balcony or small space, you can always opt for a vertical garden design or place hanging baskets on the balcony railing.



